

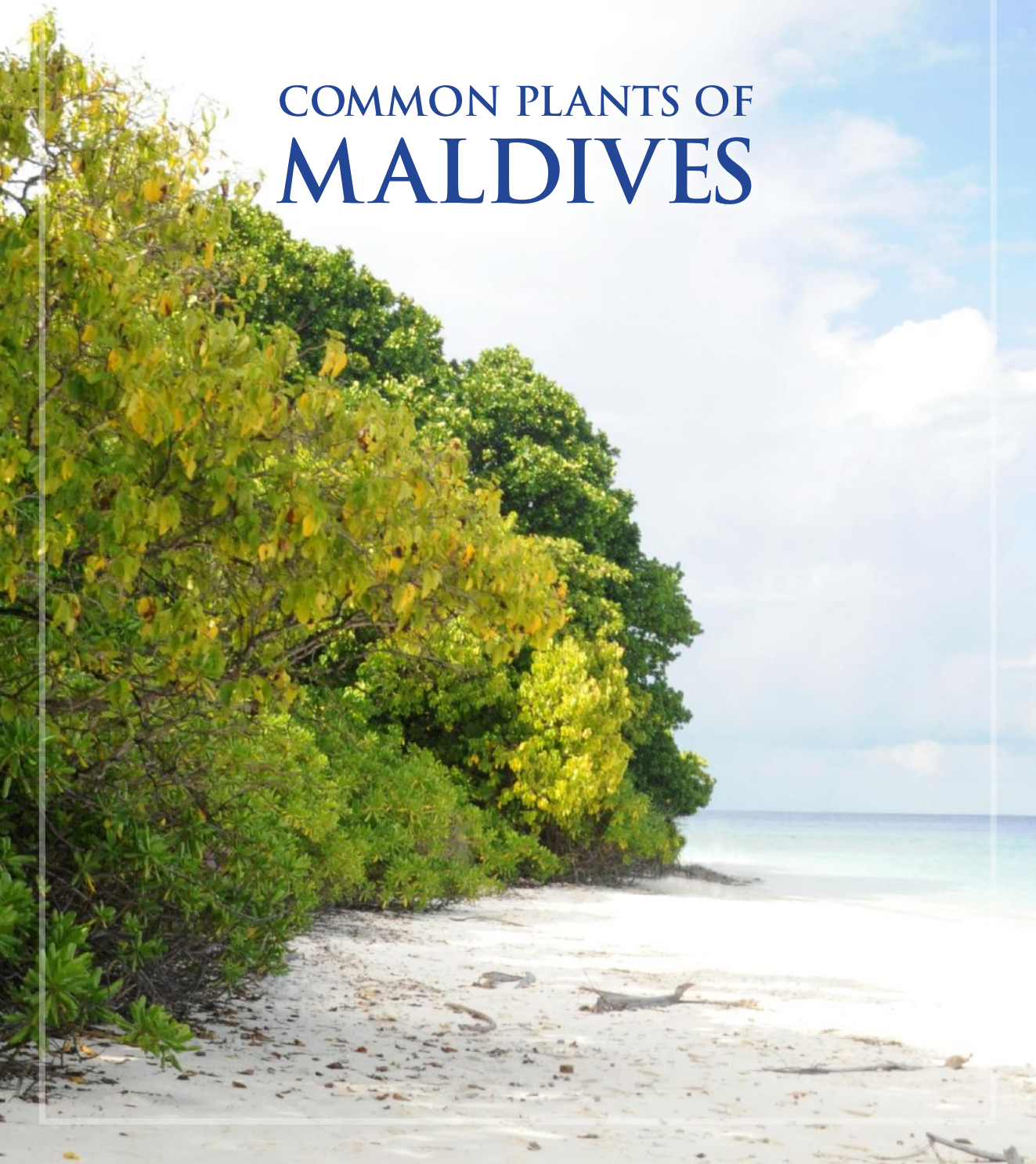


Food and Agriculture
Organization of the
United Nations



Kerala Forest
Research Institute
Kerala, India

COMMON PLANTS OF MALDIVES



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P. Sujanapal
K. V. Sankaran

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P. Sujanapal
K.V. Sankaran



Cordia subcordata - Rasgatheemu island

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Introduction

Over the past century, island biodiversity across the globe has been subjected to extreme pressure due to habitat change, over-exploitation, invasion by alien species and more importantly climate change and pollution. It is common knowledge that small island countries are ecologically fragile and are more vulnerable to such challenges. Maldives is no exception to this. Natural habitats and biodiversity of most tropical islands are increasingly impacted by cyclones, storms and hurricanes associated with climate change. Recent estimates show that of the 724 animal extinctions recorded worldwide in the last 400 years, about half were island species (UN, 2014). However, such global estimates on plant species are not available for want of data.

This indicates that basic information on the flora and fauna of an area is mandatory to evaluate species losses due to environmental challenges and to mitigate damages due to future threats.

Maldives – the landscape

Maldives forms the major chunk and biodiversity rich central portion of the Lakshadweep-Maldives-Chagos Archipelago in the Indian Ocean. The chain of 26 atolls on the crest of 1600 km long submarine mountain range with live coral reef of underwater gardens provide home to hundreds of species varying in shape, size, colour and diversity - a unique combination of marine and terrestrial biota. Vegetation and other ecological features vary between



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islands from north to south in Maldives. Moreover, these aspects vary between exterior and interior islands in various atolls since the exterior one is more subjected to oceanic currents compared to the latter. The characteristics of the foreshore area also influence the ecology and vegetation of islands.

Though the vegetation of Maldives is continuously subjected to harsh climatic and environmental factors, profuse growth of trees, some of which may attain even 30 m height, indicates the uniqueness of the Island's terrestrial vegetation. Tall trees such as *Ficus*, *Casuarina* and Coconut are very common in most of the islands. Large mangrove trees are characteristic of some of the northern islands. Prolific growth of *Scaevola*, a secondary species, is a special feature of most of the agriculture islands irrespective of inhabitation. Despite the tropical climate providing ideal conditions for luxuriant growth, factors such as salinity, soil alkalinity and salt-laden winds contribute to variations in the morphology of plants in Maldives compared to that in the mainland. In general, the diversity of terrestrial flora is low because of the uniform topography, soil and climate. However, the islands support extremely rich coastal vegetation.



Agriculture

Maldives is the land of coconut which forms part of the natural vegetation and agriculture in the country. Taros and other leafy vegetables are the major indigenous crops cultivated as part of traditional agriculture. The Maldivians usually preserve a small area of forest in one portion of the inhabited islands. These forests act as bio-shields and help to conserve the native biodiversity and provide ecosystem services to the islanders to a certain extent. The Islanders cultivate





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a wide variety of crops in their homesteads such as chilly, sweet potato, pineapple, sugarcane, almond, moringa, millet, corn, breadfruit, mango, papaya, lime, banana, pumpkins, watermelon, cucumber, crucifers, taro, arecanut and pepper, majority of which were introduced from other countries. A large number of species was also introduced for horticultural purposes, avenue planting and gardening. Hence, the Maldivian flora is composed of a large number of exotic species.

Phyto-geography and vegetation

The climate of Maldives is tropical warm-humid since the Islands are spread around the equatorial region. The floristic region comes under the broad Indo-Pacific biogeographic province with phyto-geographical similarities. The typical physiography of Maldives supports rich coastal flora and the natural vegetation can be broadly classified as tropical coastal forest with variations in microhabitats



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which give rise to edaphic types. Microhabitats and floristic associations vary from southern to the northern islands.

Foreshore or sandy vegetation is mainly composed of herbaceous flora with creepers which may or may not be inundated during the high tides. Certain foreshore areas are devoid of any vegetation because of the hard calcareous substratum.

The backshore and inland vegetation varies according to physiography and sometimes in a contiguous pattern. Certain micro-habitat associations are noticed along the shore-crest and inland regions. Though the aggregation of *Scaevola* is an indicator of disturbed habitats, it forms plant associations with

Pandanus and *Guettarda* both in shore-crest and inland. In certain areas, the plant forms a long strip of thick vegetal cover over the beach-crest. The other major plant association in the shore-crest is *Pemphis-Suriana*, mainly in foreshore areas with coral sand, rubbles, reef rock, coral conglomerate beach rock or hard pan coral. *Thespesia-Cordia-Calophyllum*, *Cordia-Pisonia-Talipariti* and *Scaevola-Tournefortia-Guettarda* also form plant communities in this area.

The vegetation of the inner islands is unique and composed of a number of edaphic types. In general, most of the areas support rich growth of trees and shrubs which occur either in pure or mixed stands. *Cocos*



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nucifera is the major component of the tree vegetation. Large trees of *Ficus benghalensis* occur in almost all the islands. Densely crowned *Artocarpus altilis* trees bearing fruits is the characteristic feature of the Maldivian homesteads. Notable feature of some of the southern islands is the formation of large fresh water lakes, wetlands and lagoons. Traditionally, some of the wetlands are used for taro cultivation. Small ponds with brackish water and large strips of mangrove vegetation along the coast are also peculiar to the southern islands.

The large extent of pure mangrove stands is characteristic of the northern islands and these islands are also noted for their floristic richness and diversity. *Lumnitzera racemosa*, *Bruguiera cylindrica* and *B. gymnorhiza* are the dominant species in most of the mangrove habitats and each of them forms separate and distinct patches. Large trees of *Sonneratia* and *Bruguiera* are also common in mangrove habitats of northern islands. *Bruguiera cylindrica* is the most common true mangrove in Maldives and it occurs throughout the islands from north to south.



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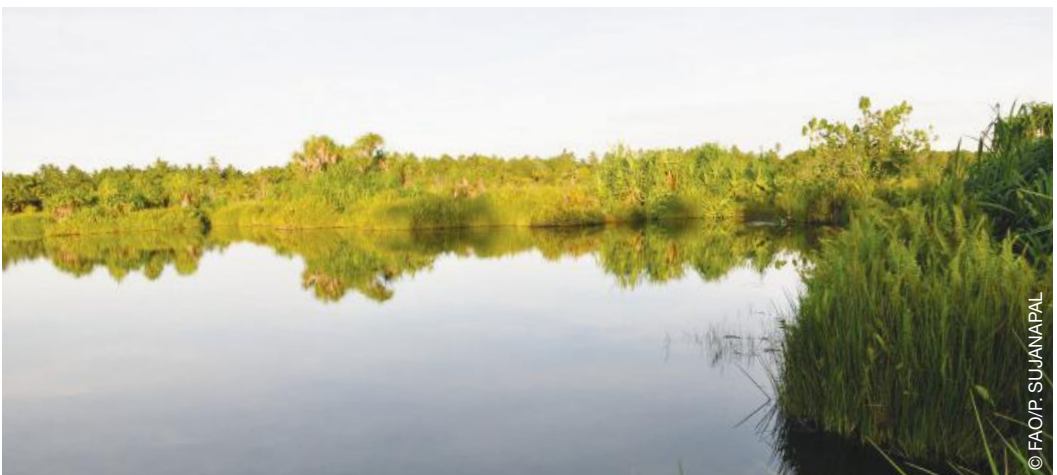


The occurrence of large extents of *Lumnitzera*, pure strands of *Flagellaria* and tall trees of *Sonneratia* and *Bruguiera* indicates the uniqueness of the mangrove habitats in Maldives compared to the other parts of south Asia. The other major tree associations in the inner areas of islands include *Cocos-Pandanus*, *Pemphis-Suriana-Pandanus*, *Guertadia-Talipariti-Thespesia*, *Calophyllum-Barringtonia* and *Hernandia-Cordia-Pisonia*. The terrestrial flora and vegetation of the islands in the southern and northern

atolls are much richer compared to the central region. Many of these biodiversity rich habitats, which occur mainly in the inhabited island group, call for special conservation measures.

Exotic and Invasive alien plants

The islands of Maldives hold the potential for conservation and restoration of tropical coastal habitats. However, a large number of exotic and invasive plants pose threat to the natural ecosystems of the Island





and affects its economy. A rough estimate shows that more than 60 percent of the flora of Maldives is composed of exotic species and some of these species have become invasive. Since the affected islands are mostly small in size, the pattern of invasion is different compared to that in other tropical habitats. Open lands and abandoned agricultural areas provide suitable habitats for the establishment and spread of invasive species. Import of various agricultural commodities, timber,

horticultural species, animals, animal products and organic manure without observing proper quarantine measures serve as the major pathway for invasion. Untreated packaging materials which fail to comply with the International Standards of Phytosanitary Measures also promote invasion by alien flora and fauna.

The major invasive plants observed in Maldives include *Wollastonia biflora*, *Cassytha filiformis* and *Lecuaena leucocephala*



which pose serious threat to the native flora. *Wollastonia* forms impenetrable thickets in many of the inhabited islands, especially in the open areas, while *Cassytha* is parasitic on almost all groups of plants. Other alien species such as *Prosopis juliflora*, *Lantana camara*, *Sphagneticola trilobata* and *Bidens pilosa* have already established and are in the spreading phase. These plants threaten the fragile ecosystem of the Island and impacts on the livelihood and economy of the people.

Prevention of invasion or at the best early detection and rapid control are the most suitable options to avoid damages due to invasive alien species. However, lack of awareness on the damages due to invasive species and the difficulty in distinguishing between alien and native species frustrate implementation of these options in Maldives. The present book, the 'Common Plants of Maldives' is prepared in this context. This book is designed to function as a primary source of information on all common plants of Maldives which include alien and invasive species. Its primary objective is to aid easy identification of native and exotic plants by students, teachers, researchers, quarantine officers, policy makers, farmers and all those who are concerned with plants.

Format and presentation of the book

The book includes information on 270 species of vascular plants observed during our surveys conducted in more than 50 islands in Maldives. It deals with the common native as well as all alien plants which are currently occurring in the Islands. Information provided includes the current *valid name* of the plant, most popular synonym/s, name/s in Dhivehi and a few common English names. Plant descriptions given include data on vegetative characters avoiding confusing scientific terms, as far as possible. Data collected from the field are the source of information on the occurrence and pattern of distribution in different islands. Threat and damages caused by invasive alien species are also included. Ethnobotanical information collected during the study is given under uses. However, use of any plant/plant parts for medicinal purposes, based on the information provided in this book, cannot be recommended for want of evidence on the non-toxicity of the plant/plant parts. So, the readers of the book are advised to refrain from use of the plant/plant parts for medicinal purposes.

It is hoped that this book will be used as a field guide for identification of native, non-native and invasive plants of Maldives by specialists and non-specialists alike.



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THE PLANTS

Description, distribution,
uses and other information



Inflorescence of *Ricinus communis*

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Abutilon indicum (L.) Sweet



Synonym: *Sida indica* L.

Family: Malvaceae

Local name (Dhivehi): Maabbelhau

English names: Country mallow, Indian mallow

Description: Shrubs; stem densely clothed with minutely short, stellate-pubescent and simple hairs. Leaves 3-8×4-7 cm, ovate-orbicular, base cordate, margins crenate-dentate, apex acute or acuminate, 5-7-nerved from base, velvety, glaucous beneath with dense stellate indumentum; petioles 2-6 cm long. Flowers axillary, solitary; pedicels 4-5 cm long, jointed very near the top. Calyx lobes 5, ca. 4 mm long, ovate. Corolla 2-2.5 cm across, orange-yellow. Staminal column ca. 6 mm long. Ovary ca. 4 mm across, densely pubescent with silvery white hairs; style 15-20, to 1 cm long; stigma capitate.

Schizocarp to 1.2×2 cm, globular; mericarps 15-20, to 12×9 mm, reniform, flattened, densely stellate-hairy, upper part rounded, mucronate, blackish when mature. Seeds to 3 mm long, ovoid or reniform, warty, black.

Flowering & fruiting: September - April

Native range: The tropics and subtropics

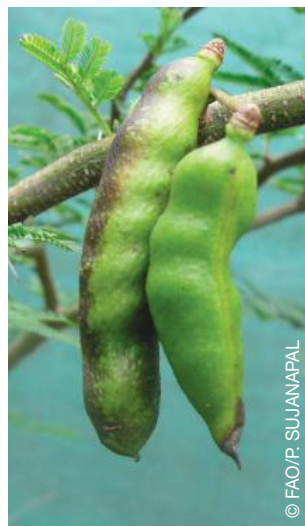
Distribution: Widespread in the tropics and subtropics

Occurrence in Maldives: Fairly common in open areas

Uses: Infusion of leaves and roots are prescribed as a diuretic and demulcent in fevers, chest infections, gonorrhoea, toothache and urethritis. Flowers and leaves are used for local application to treat boils and ulcers. Seeds are a laxative and expectorant.



Acacia farnesiana (L.) Willd.



Synonyms: *Acacia acicularis* Willd., *Mimosa farnesiana* L., *Mimosa indica* Poir.

Family: Fabaceae-Mimosoideae

Local name (Dhivehi): Baiy goanbili

English names: Sweet acacia, Cassie flower, Perfumed wattle, Needle bush

Description: Deciduous trees, to 10 m high; branchlets warty. Leaves pinnate to 5 in a cluster, 2-7 cm; pinnae 5 pairs, 1-2.5 cm; leaflets 10-15 pairs, oblong, 5×1 mm, overlapping, glabrous, base truncate, margin entire, apex obtuse; petiole to 1.5 cm, with a gland near the middle; rachis stiff-pubescent; stipular thorns unequal, to 2 cm, straight. Flower-heads globose, 8 mm across, 2 or 3 in axillary cluster, to 2 cm; peduncle densely stiff-pubescent. Flowers 2 mm across. Calyx-tube 5-toothed, to 1.5 mm. Petals 5, yellow, to 2 mm. Stamens numerous, to 4 mm, basally connate. Ovary stipitate; style to 3 mm. Pod terete, 5×0.5 cm, pulpy, turgid, horned; seeds 20 or more, globose, 0.5 mm, 2-seriate.

Flowering & fruiting: September- January

Native range: Tropical and subtropical America

Distribution: Widespread in the tropics

Occurrence in Maldives: Recently established in farming areas in some of the islands. Incursion may probably be through seeds transported along with cow dung.

Uses: The bark and pods are sources of tannin used for dyeing leather. Bark exudate is a good substitute for gum Arabic. Tender leaves are bruised with a little water and swallowed for gonorrhoea. Essential oil from the flowers yields a pleasant perfume.



Acalypha fruticosa Forssk.



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Synonyms: *Acalypha betulina* Retz.

Family: Euphorbiaceae

Local name (Dhivehi): Vaffofalhi

English name: Birch leaved acalypha

Description: Erect, profusely branched sub-shrubs. Leaves 2-5×1-3 cm, ovate, base truncate or subcordate, apex acuminate, margin crenate-serrate, hairy on both sides, aromatic, glandular below, glands orange; petiole to 3 cm long. Spikes short, axillary, solitary, androgynous, to 2 cm long. Tepals tomentose, with sessile glands outside. Stamens many. Female flowers below, sessile; bracts reniform; ovary to 0.5 mm across; styles many. Capsules trilobed, 3× 2 mm., seeds ellipsoid-ovoid, brown.

Flowering & fruiting: July- August

Native range: Southern and eastern Africa

Distribution: Southern and eastern Africa and South Asia

Occurrence in Maldives: Fairly common in open areas

Uses: Leaf decoction is used for the treatment of swellings, bee sting, skin diseases, dysentery, itch and epilepsy. Leaf extract is given to children for cough and breathing problem. Root decoction is effective in curing fever and cold. The leaf juice is used to treat ophthalmia.



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Acorus calamus L.



Synonyms: *Acorus angustatus* Raf., *Acorus aromaticus* Gilib.

Family: Araceae

Local name (Dhivehi): Huvagoh

English names: Sweet flag, Sweet root

Description: Semi-aquatic perennial herbs; rhizomes creeping, jointed, strongly aromatic, pale to dark brown and spongy inside. Leaves narrow, up to 80 cm long, linear to narrowly ensiform, glossy bright green, apex acute, base amplexicaul; petioles sheathing for 20-50 cm. Flowers pale green, fragrant, arranged compactly on a sessile, cylindrical, stumpy spadix 5-7 cm long. Fruits green, angular, 3-celled, fleshy, containing 1-3 oblong seeds.

Flowering & fruiting: April- July

Native range: Not clearly known

Distribution: North temperate hemisphere and tropical Asia

Occurrence in Maldives: Grown in homesteads as a medicinal plant

Uses: The rhizome is a remedy for dyspepsia, flatulence, loss of appetite, choleric diarrhea and a number of other ailments.



Acrostichum aureum L.



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Synonyms: *Acrostichum inaequale* Willd.,
Chrysodium aureum (L.) Mett.

Family: Pteridaceae

Local names (Dhivehi): Maakula hangali,
Mayefungi

English names: Golden leather fern,
Mangrove fern, Swamp fern

Description: Terrestrial fern; scale broad, basal; stipe woody on stout rhizome. Fronds simple pinnate, leathery, leaflets 8-14, alternate, 10-25×1-5 cm, linear-oblong, apex mucronate, base tapering, venation reticulate with uniform elongate areoles diverging from the thickened midrib. Sori on apical pinnae, beneath, densely aggregated, non-indusiate.

Reproductive structures: Sporophylls produced throughout the year

Native range: South and Southeast Asia, Australasia, Africa and America.

Distribution: Widespread in the tropics and sub-tropics

Occurrence in Maldives: Fairly common in a few northern islands- associated with mangroves

Uses: Dried older leaves are resistant to white ants and fire and are used as roof thatch, wall strengthener, etc. Fibers of old leaves can be used to make cord. Rhizomes pounded into a paste is a remedy for wounds and boils. Young leaves and shoots are used as vegetable.



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Adenanthera pavonina L.



Synonyms: *Adenanthera gersenii* Scbrigheff., *Corallaria parvifolia* Rumph.

Family: Fabaceae - Mimosoideae

Local name (Dhivehi): Madhoshi

English names: Circassian tree, Coral wood, Red bead tree

Description: Deciduous trees; to 25 m high; bark grey, smooth. Leaves bipinnate, alternate; rachis 15-60 cm long, stout, pulvinate, with a gland at the tip; pinnae 2-3 pairs, 20-40 cm, opposite or rarely subopposite, even pinnate; leaflets 8-20, alternate, 1-6×2-4 cm, oblong, oblong-elliptic, base slightly oblique and truncate, apex round, emarginate or obtuse and mucronate; lateral nerves 9-10 pairs. Flowers pale yellow, ca. 6 mm across, clustered in axillary spiciform racemes; pedicel ca. 3 mm. Calyx tube campanulate, 5 toothed. Petals 5, connate below, linear-lanceolate, upto 5 mm long, glabrous. Stamens 10, free, filaments alternately long and short; anthers oblong, ending in a stipitate gland. Fruit a pod, 10-25×0.7-1.5 cm, straight to

falcate to slightly twisted, spirally coiled after dehiscence; seeds 6-15, 8-10×7-9 mm, elliptic-lenticular, glossy, red.

Flowering & fruiting: January – September

Native range: Southeast China and India

Distribution: Sri Lanka, India, Myanmar, Thailand, Malaysia and China

Occurrence in Maldives: Fairly common in most of the inhabited Islands

Uses: The wood is hard and is used for making furniture, boat, etc. The bark and leaves are astringent, vulnerary and aphrodisiac, and are useful in colonorrhoea, haematuria and ulcers. The seeds are bitter, astringent, sweet, cooling, aphrodisiac, suppurative, antiemetic and febrifuge. The heartwood is astringent and haemostatic.

Threat & damage: An invasive tree which invades intact and undisturbed natural habitats and quickly establishes colonies.

Management: Seedlings and saplings can be removed by hand pulling or digging. Herbicide application on the basal bark is effective to kill mature trees.

Aerva lanata (L.) Juss.



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Synonyms: *Achyranthes lanata* L., *Aerva floribunda* Wight

Family: Amaranthaceae

Local name (Dhivehi): Hudhufuffilaa

English name: Polpala

Description: Erect herbs, shoot white, woolly tomentose. Leaves simple, alternate, 3-4×3 cm, orbicular to ovate, apex obtuse, mucronate, pubescent above, densely woolly below; petiole to 1 cm. Spikes clustered, axillary, to 1 cm, densely tomentose; bracts and bracteoles 1 mm, ovate; tepals 1.5 mm, oblong, mucronate; filaments basally connate, 0.5 mm, staminodes subulate; ovary 0.4 mm long. Utricle breaking irregularly; seeds black.

Flowering & fruiting: September – April

Native range: Tropical Africa, India, Malaysia and Australasia

Distribution: Widespread in the tropics and subtropics

Occurrence in Maldives: Fairly common in open areas – naturalised.

Uses: The plant is used to treat boils, cephalagia, cough, strangury and lithiasis. Locally, it is used to make *Kandifaarubey*s, which is a cure for urinary problems. Leaves are used to make salads.



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Albizia saman (Jacq.) Merr.



Synonyms: *Mimosa saman* Jacq., *Samanea saman* (Jacq.) Merr.

Family: Fabaceae - Mimosoideae

Local names (Dhivehi): Reethigas, Bodu gas

English names: Rain tree, Cow tamarind, Monkeypod

Description: Trees, to 30 m high, bark rough, deeply fissured. Leaves bipinnate, alternate; rachis 19-24 cm long, pubescent, pulvinate; pinnae 6-7 pairs, 3-15 cm long, 2-glands at the top of the pulvinate on the upper side and one between each pair of leaflets; leaflets 6-16, opposite, subsessile, 1.5-4.5×1-3 cm, oblong or ovate-oblong, base obliquely truncate, apex obtuse, mucronate, glaucous beneath. Flowers subsessile, in dense heads, peduncle 6-10 cm long, solitary or 2-3 together in the axils of leaves. Calyx 3-5 mm long. Petals 8-13 mm long, pinkish, lobes 5, ovate. Stamens many, 3 cm long, united at the base in a tube; filament white in the basal half and pink in the upper portion. Fruit a pod, 12-20×1-2.5 cm, indehiscent, epicarp thin, crustaceous,

glossy brown, mesocarp pulpy, sticky; seeds 16-20, 1×0.6 cm, smooth, brown, glossy.

Flowering & fruiting: February – May

Native range: Central and South America

Distribution: Widely planted in the tropics as an avenue tree; invasive in the Pacific Islands

Occurrence in Maldives: Common in inhabited islands – apparently naturalized.

Uses: An excellent avenue tree, timber is durable and used for making furniture and plywood. The plant is a traditional remedy for colds, diarrhea, headache, intestinal ailments and stomach ache. The leaf infusion is used as a laxative. In West Indies, seeds are chewed for sore throat. The alcoholic extract of the leaves inhibits growth of *Mycobacterium tuberculosis*.

Threat & damage: The species has become naturalised in many countries due to its high reproductive potential, orthodox seeds and adaptability to a wide range of environmental conditions. It can dominate over native vegetation and invade natural forest ecosystems.

Allophylus cobbe (L.) Raeusch.



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Synonyms: *Rhus cobbe* L., *Schmidelia rheedei* Wight, *Allophylus serrulatus* Radlk.

Family: Sapindaceae

Local name (Dhivehi): Dhonmoosa

English name: Titberry

Description: Large shrubs to small trees. Leaves trifoliate; leaflets 8-12×5-7 cm, ovate or elliptic-ovate or rhomboid-ovate, acute at apex, cuneate at base, margins serrate towards the distal half, glabrous; terminal leaflet larger; petiole to 11 cm long. Thyrses axillary, branched, longer than leaves, 12-16 cm long. Sepals 4, 0.5-1 mm long, ovate-obtuse. Petals 4, unequal, 0.5-1 mm long, white. Fruits ca. 7 mm across, globose, bright red.

Flowering & fruiting: July- November

Native range: Bangladesh, India, Sri Lanka, Andaman and Nicobar Islands, Myanmar, China and Philippines.

Distribution: Southeast Asia

Occurrence in Maldives: Common in most of the islands

Uses: Fruits are edible and are used against tapeworm. Bark and leaves are used to treat elephantiasis. Decoction of leaves is used to treat colic ailments.



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Alocasia macrorrhizos (L.) G. Don



Synonyms: *Arum macrorrhizon* L., *Colocasia macrorrhizos* (L.) Schott

Family: Araceae

Local name (Dhivehi): Boafuredhdhe

English names: Giant Colocasia, elephant ear taro, Giant taro

Description: Stout perennial herbs; stem horizontal or erect, 4-5 cm thick. Leaves several, to 48×33 cm; ovate, acute, proximal lobes rounded; nerves to 8 pairs, lowest pair bear the lateral nerves of the lobes, intercostae parallel, joining at the middle. Peduncle to 30 cm long, stout; spathe to 28 cm long, constricted at middle, yellowish green; spadix to 20 cm long, cylindrical, 1-1.5 cm thick, continuous. Male flowers in upper to 12 cm of the spadix; stamens

6, united into a hexagonal synandrium. Female flowers in basal 3 cm of the spadix; ovary 1-celled, ovules 3, basal. Neuter flowers flat, hexagonal.

Flowering & fruiting: October- December

Native range: Malaysia, Australia, Papua New Guinea and the Solomon Islands

Distribution: Tropical Asia, Africa, America and Oceania

Occurrence in Maldives: Occasional in homesteads

Uses: The tubers are eaten as a source of starch. The plant is also grown as ornamental. The juice from freshly cut stems is used on the skin as an antidote against stinging plants. The leaves are used to wrap fevered and people with burn injuries for comfort.

Alternanthera philoxeroides (Mart.) Griseb.



Synonyms: *Achyranthes philoxeroides* (Mart.) Standl., *Bucholzia philoxeroides* Mart.

Family: Amaranthaceae

Local names (Dhivehi): Rai vina, Kan vina

English name: Alligator weed

Description: Profuse, perennial suberect herbs, stem prostrate, fistular, striate, rooting at the nodes. Leaves opposite, 5-10×0.5-2.5 cm, elliptic to obovate-lanceolate with acute base, midrib prominent on the lower surface; petiole 1-6 mm long. Inflorescence axillary, pedunculate, white, globose, heads 10-18 mm across; bracts ovate-lanceolate. Perianth dorsally compressed, white, glabrous; tepals 5, subequal, oblong-lanceolate with mucronate tip, 1-5 nerved. Fertile stamens 5, pseudo-staminodes longer than the filaments and lacerate at tips. Ovary shortly stalked, ovoid with slender style and capitate, densely papillose stigma.

Flowering & fruiting: September- March

Native range: South America

Distribution: Established in Indo-Malaysian region and Australia

Occurrence in Maldives: Fairly common in water logged areas and lakes

Uses: It is used for treating hazy vision, night blindness, malaria, post natal complaints, fistulas, diarrhea, dysentery and puerperal fever.

Threat & damage: The plant is one among the worst aquatic weeds in the world. It is a serious threat to waterways preventing navigation, blocking access, disrupting flow and impacting the diversity of aquatic flora and fauna. Managing the species has proven to be an expensive and complicated ordeal.

Management: Mechanical removal and ploughing are not suitable methods since the weed can spread from cut stems and roots. *Amyothrips andersoni* and *Agasicles hygrophila* are two biocontrol agents effective against the weed. The plant is more resistant to herbicides than other aquatic macrophytes.



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Alysicarpus bupleurifolius (L.) DC.



Synonyms: *Fabricia bupleurifolia* (L.) Kuntze, *Hedysarum bupleurifolium* L.

Family: Fabaceae - Papilionoideae

Local name (Dhivehi): Thakkara

English name: Sweet alys

Description: Decumbent or sub-erect herbs. Leaves simple, alternate, to 4×0.9 cm, oblong, acute, cordate or rounded at base, ciliate; petiole 3 mm long; stipule 1 cm long. Racemes 10-15 cm long, terminal, interrupted; bracts 7×5 mm, chaffy. Flowers grouped. Calyx 10 mm long, lobes ciliate at apex. Petals bluish violet. Pods 2 cm long; joints reticulate, smooth.

Flowering & fruiting: September-January

Native range: China, South and Southeast Asia and Australia

Distribution: Indo-Malaysia to Polynesia

Occurrence in Maldives: Fairly common in open areas

Uses: The plant is used as a fodder. It is also used to treat various skin diseases.



Alysicarpus monilifer (L.) DC.



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Synonym: *Hedysarum monilifer* L.

Family: Fabaceae - Papilionoideae

Local name (Dhivehi): Maathakkara

English name: Alysicarpus

Description: Diffuse or prostrate herbs. Leaves simple, alternate, 0.8-2.5×0.5-1 cm, broadly oblong or elliptic-oblong, base subcordate, apex obtuse or rounded, mucronate; petiole 3-6 mm long. Flowers close in axillary racemes; pedicel to 2 mm long. Calyx-tube longer than the first joint of the pod; lobes lanceolate, ciliate. Corolla pink to violet; standard to 5×2 mm; wings to 4×2 mm; keels to 6 mm long. Pods 3-7-jointed, 1.2-2 cm long, moniliform with hooked hairs.

Flowering & fruiting: November-January

Native range: Tropics of Asia and Africa

Distribution: Tropical Asia and Africa

Occurrence in Maldives: Fairly common in open areas of some northern islands

Uses: As fodder.



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Alysicarpus vaginalis (L.) DC.



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Synonyms: *Hedysarum vaginale* L.,
Hedysarum cylindricum Poir.

Family: Fabaceae - Papilionoideae

Local name (Dhivehi): Vihafilaa

English names: Alyce clover, One-leaf clover

Description: Diffuse herbs. Basal leaves 0.8–3.5×0.7–1.5 cm, ovate- orbicular, base cordate, apex rounded, apiculate; upper leaves to 5×1.8 cm, oblong to linear-lanceolate, base subcordate, apex acuminate, petiole to 6 mm long; stipules to 1.8 cm long, lanceolate, striate, scarios. Flowers in terminal racemes up to 7 cm long. Calyx ca. 4 mm long, equalling or slightly longer than the first joint of pod. Corolla pink to purple; standard petal ca. 5 mm long. Staminal tube to 5 mm long; anthers uniform. Ovules many; style filiform, incurved at apex. Pods 1.3–2 cm long, subterete, not constricted between the joints, reticulately veined, joints 4–8.

Flowering & fruiting: September- January

Native range: Africa, Asia, Malaysia and Australia

Distribution: Introduced to America and the Caribbean and parts of Oceania

Occurrence in Maldives: Occasional in open areas

Uses: The plant is mainly grown as a forage or cover crop. In traditional medicine, its roots are used for the treatment of cough, leprosy, urinary disorders and snake bite. In some countries, the seeds are used against dysentery and colics.

Threat: The plant is reported as an agricultural/enviromental weed in several countries in the Asia-Pacific region and Trinidad (Caribbean islands). It is known to be invasive in Cuba.



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Amaranthus caudatus L.



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Synonyms: *Amaranthus edulis* Speg.,
Amaranthus leucocarpus S.Watson

Family: Amaranthaceae

Local name (Dhivehi): Massaagu

English name: Love-lies-bleeding

Description: Erect annual herbs. Leaves 3-15×2-7 cm, ovate-oblong, base attenuate, apex obtuse to subacute, mucronate; petiole to 7 cm long. Flowers in axillary and terminal paniced spikes, red or green, to 20 cm long; male and female flowers intermixed throughout the spikes. Bract ovate, caudate-acuminate, aristate. Flowers unisexual. Perianth 5, 2-3.5 mm long, oblong-elliptic, aristate. Stamens 5. Stigma 3-lobed, erect or flexuose. Utricle ca. 2 mm long, ovoid-globose, circumscissile. Seeds 1-1.5 mm across, lenticular, compressed, black, shining.

Flowering & fruiting: September- December

Native range: Possibly Andes Mountains in South America

Distribution: Cosmopolitan

Occurrence in Maldives: Common in open areas

Uses: The leaves are a nutritious vegetable. Seed is eaten cooked or grounded into a powder and used in baking. The seeds are also fermented to make alcoholic beverages. The plant is an astringent, anthelmintic and diuretic. It is also grown as an ornamental.



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Ammannia baccifera L.



Synonyms: *Ammannia apiculata* Koehne, *Ammannia indica* Lam.

Family: Lythraceae

Local name (Dhivehi): Karanfui

English name: Blistering ammania

Description: Erect annual herbs; stem 4-angled or more or less winged. Leaves simple, decussate, sessile, 2-6×0.5-0.8 cm, linear to elliptic, apex acute, base attenuate, chartaceous. Cymes dischiasial, axillary. Flowers 4 or 5-merous, perigynous; pedicels, ca 2 mm long. Calyx tube 1-2 mm long, campanulate; lobes 4, 1-1.5 mm long, triangular. Petals absent. Stamens 4; filaments ca. 0.5 mm long. Ovary 1 mm in diam; ovules many; stigma capitate. Capsule 1.5-2 mm across, globose, exceeding calyx tube; seeds brownish, concavo-convex.

Flowering & fruiting: September-December
Native range: Tropical and subtropical Asia and Africa

Distribution: Tropical Africa, Asia, Europe and Australia

Occurrence in Maldives: Fairly common in marshy areas

Uses: Leaves or the ashes of the plant mixed with oil is applied to cure rheumatism and herpetic eruptions. The plant is useful as a remedy for burning sensation, anorexia, dyspepsia, colic, strangury, seminal weakness, rheumatism and intermittent fevers.



Anisomeles indica (L.) Kuntze



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Synonyms: *Nepeta indica* L., *Anisomeles albiflora* (Hassk.) Miq.

Family: Lamiaceae (Labiatae)

Local name (Dhivehi): Maskothan

English name: Indian catmint

Description: Sub-shrubs, stem sub-quadrangular. Leaves ovate-lanceolate to oblong-lanceolate, 3.6-16×1.3-7 cm, rounded at base, acute, crenate-serrate, slightly bullate and velvety, lanate above; petiole 0.7-3.5 cm long. Racemes to 35 cm long; verticils close, dense; peduncles densely lanate. Floral leaves 8-10 mm long. Calyx to 9 mm long. Corolla 1.4-2 cm long, pink, throat pilose with gland-tipped hairs. Nutlets ovoid, 2.5×1.5 mm, trigonous, glabrous, blackish-brown.

Flowering & fruiting: October - January

Native range: Southeast Asia

Distribution: Southeast Asia to Australia

Occurrence in Maldives: Fairly common in open areas in some of the northern islands

Uses: The plant is used for the treatment of fever, abdominal pain, skin sores, and snake

bites. The leaves yield an essential oil which is antimicrobial and applied externally as an embrocation in rheumatic arthritis. It is also used as a compound in cosmetics. The plant is burnt to act as a mosquito repellent.



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Annona glabra L.



Synonym: *Annona palustris* L.

Family: Annonaceae

Local name (Dhivehi): Kalhuthumeyvaa

English names: Alligator apple, Pond apple

Description: Trees, to 10 m high. Leaves simple, alternate; lamina 6-20×3-8 cm, elliptic or oblong-lanceolate, base obtuse, round or decurrent, apex acute, acuminate or obtuse, coriaceous; lateral nerves 8-12 pairs; petiole 8-20 mm long, stout. Flowers bisexual, yellowish-green, solitary, internodal or terminal on short branchlets; pedicel 15-20 mm long. Sepals 3, 5×7 mm, valvate, ovate, glabrous. Petals 3+3; outer petals 1.5-3 cm long, ovate, green and glabrous outside, yellow and minutely puberulous inside; inner petals 1.2-2.5 cm, elliptic-oblong, puberulous, yellow outside, carmine inside, minutely puberulous on both surfaces. Stamens many, 3-4 mm long, connectives at apex slightly convex; carpels many, connate at anthesis. Fruit an aggregate of berry, 5-12×5-8 cm, ovoid, yellow to orange, smooth, pulp yellow; seeds many, black.

Flowering & fruiting: January – May

Native range: Tropical America and West Africa

Distribution: Throughout the tropics especially in the Asia-Pacific region

Occurrence in Maldives: Common in most of the islands, gregarious growth is not observed.

Uses: The fruits are edible and used to prepare jam, jellies and wine. It is a popular ingredient in fresh fruit drinks of Maldives. The flesh is reported to have narcotic effect. The plant is used as a superior rootstock for Soursop. Wood and roots are used as fish floats. Seeds are reported to contain anticancer compounds. The leaves are a deterrent to the invasive Giant African snail.

Threat & damage: It grows in estuaries and similar natural habitats and chokes the natural vegetation, especially of the mangrove swamps. Its seedlings may carpet the banks and prevent other species from germinating or thriving.

Management: Hand pulling has been successful in ditches and drains. Cut-stump method using herbicides is effective in killing large trees.

Annona muricata L.



Synonyms: *Annona bonplandiana* Kunth, *Annona macrocarpa* Werkle.

Family: Annonaceae

Local name (Dhivehi): Anoanaa

English names: Guanabana, Prickly custard apple, Soursop

Description: Trees to 10 m high, bark pale brown. Leaves simple, alternate, distichous, 7-15×3-5.5 cm, elliptic, oblong, obovate or elliptic-obovate, base acute, apex acute to acuminate; lateral veins 8-10 pairs; petiole 4-8 mm long, slender, grooved above. Flowers yellowish-green, solitary, axillary or from mature branches. Sepals 3, triangular, persistent. Petals 6 (3+3) ovate-acute, yellow, thick, glabrous, outer ones 2.5-3.5×2-2.5 cm, base cordate, apex acuminate, inner petals ca. 1.5×1 cm, shortly stipitate. Stamens many, 4-5 mm long, linear, filaments broad at base. Fruit ovoid to obovoid, 15-25×10-15 cm, green, covered with curved spines, stalks 2-3 cm long, stout; seeds many, reddish-brown, ca. 1.5 cm long.

Flowering & fruiting: April - October



Native range: Central America and West Indies

Distriubution: Introduced and cultivated widely

Occurrence in Maldives: Occasional in some of the inhabited islands

Uses: Fruits are edible. It is a good source of carbohydrates, fibers, minerals and vitamins. The seeds are used as a fish poison and have insecticidal properties. The roots are antispasmodic and parasiticial. Fruits and leaves have anticarcinogenic, antitumor, antispasmodic, sedative and hepatoprotective effects.



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Annona reticulata L.



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Synonym: *Annona excelsa* Kunth

Family: Annonaceae

Local names (Dhivehi): Dhandigandu atha, Vilaathu athu

English names: Custard apple, Bullock's heart

Description: Trees to 8 m high; bark pale brown. Leaves simple, alternate, distichous, 10-20×3.5-7 cm, ovate-lanceolate, oblong, oblong-lanceolate, base acute, obtuse, apex acuminate, coriaceous; lateral nerves 10-15 pairs, prominent, intercostae reticulate; petiole 10-20 mm long, stout, grooved above. Flowers yellowish-green, several from internodal cymes, rarely opposite to leaves. Sepals 3, 2-3 mm long, pubescent outside, glabrous within. Petals 3+3, outer ones 1.5-2 cm, puberulous; inner ones reduced. Stamens many; anther cells hidden by the overlapping connectives. Fruit an aggregate of berry, to 10 cm across, spherical or ovoid, yellowish-red; areoles flat, rather separated by reticulations of raised ridges; pulp yellowish; seeds black-brown.

Flowering & fruiting: May-August

Native range: Central America and West Indies

Distribution: Introduced and cultivated in the tropics

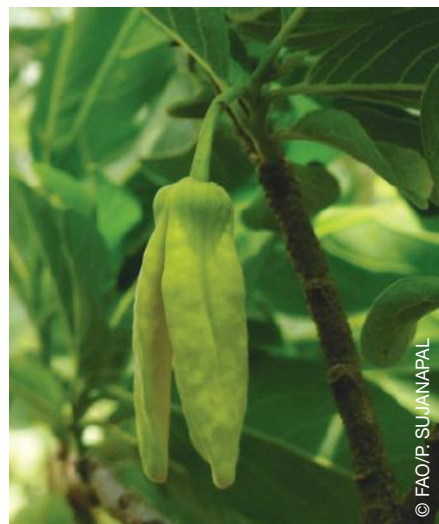
Occurrence in Maldives: Common in most of the inhabited islands

Uses: The fruits are edible. It is a good source of carbohydrates, vitamins, fibers and minerals. The seeds are toxic and have insecticidal properties. A decoction made with roots is taken as a febrifuge. The bark is astringent and the decoction is taken as a tonic and also as a remedy for diarrhea and dysentery. The leaves are used in tanning and they yield a blue or black dye.



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Annona squamosa L.



Synonyms: *Annona asiatica* L., *Annona cinerea* Dunal

Family: Annonaceae

Local name (Dhivehi): Dhivehi atha

English names: Sugar apple, Sweet sop, Sweetsop-anon, Araticum

Description: Trees to 7 m high. Leaves simple, alternate, distichous, 5-17×2-7 cm, ovate, ovate-lanceolate or elliptic-oblong, base acute, cuneate, or round, apex acute or obtuse, glaucous beneath, coriaceous; lateral nerves 8-12 pairs; petiole 6-20 mm long, stout, grooved above. Flowers bisexual, axillary, solitary or a few together, leaf-opposed; pedicels 1-3 cm long. Sepals 3, 2-3×3-4 mm, broadly ovate, shortly acuminate, pubescent outside. Petals 6 [3+3], outer 3 petals, 1.5-3×0.3-0.5 cm, linear-oblong, thick, greenish-white or yellow, reddish at base inside; inner three petals usually missing or rudimentary, ovate, ca. 1 mm long. Stamens many, anther thecae narrow, with ovoid top of connectives. Fruit an aggregate of berry, 6-10 cm across, ovoid, greenish, glabrous, tuberculate with rounded tips, glaucous, pulp white; seeds

many, black, shiny.

Flowering & fruiting: June – October

Native range: Central America and West Indies

Distribution: Introduced and cultivated in the tropics

Occurrence in Maldives: Common in most of the inhabited islands

Uses: Fruits are edible. It contains minerals, fibers, carbohydrates and vitamins. Roots are used to treat mental depression and spinal disorders. The seed oil is highly toxic and insecticidal.



Apluda mutica L.



Synonyms: *Apluda aristata* L., *Calamina mutica* (L.) P.Beauv.

Family: Poaceae/Gramineae

Local name (Dhivehi): Maakaasinjee

English name: Apluda

Description: Annual herbs; culms to 150 cm high. Leaves 5-22×0.4-1 cm, elliptic-lanceolate or linear-lanceolate, base attenuate; sheath to 7 cm long. Inflorescence a false interrupted panicle, 5-40 cm long; racemes solitary from a peduncled, glabrous, pinkish spatheole. Spikelets 3-per raceme, 1 sessile, 2 pedicelled. Sessile spikelets 3-7 mm long, lower male, upper bisexual; lower glume 3-7×1-2 mm, lanceolate, shortly bifid; upper glume 3-6×1-2 mm, boat-shaped, beaked, keeled. Palea equal to lemma.

Stamens 3. Palea 1-2×0.5-1 mm, ovate, 2-keeled, hyaline. Stamens 3; anthers 2-3 mm long, cream in colour with violet margins. Ovary 0.5-1 mm, oblong; stigma 1.5-2.5 mm, pink, feathery. Spikelet 3-7×0.5-2 mm, lanceolate, shortly bifid.

Flowering & fruiting: October- November

Native range: Asia-Pacific region

Distribution: Tropical Africa, tropical and temperate Asia, Australia and the Pacific.

Occurrence in Maldives: Common in open areas

Uses: The whole plant is used to cure gonorrhoea and as a diuretic. It is also a remedy for wounds caused by snake bites, sores and fungal infections. The plant, made into a paste, is utilized as a balm on the paralytic part of patients to regain sensation.

Araucaria heterophylla (Salisb.) Franco



Synonyms: *Araucaria excelsa* (Lamb.) R.Br., *Entassa heterophylla* Salisb.

Family: Araucariaceae

Local name (Dhivehi): Thurravaas gas

English names: Cook Pine, Christmas tree

Description: Tall trees, bark peels off in thin membranes, branches in horizontal whorls around the trunk, exudates resinous. Branchlets covered with small, green, incurved, point-tipped, spirally arranged,

overlapping leaves; young leaves needle-like, while the broader adult leaves are triangular and scale-like. Female cones scaly, egg-shaped, to 15 cm long. Male cones at the tips of branchlets, numerous, scaly, foxtail-shaped to 5 cm long.

Reproductive structures-cones: Produced throughout the year, of rare occurrence in Maldives

Native range: Norfolk Island off the coast of Australia.

Distribution: Widely grown in tropical, subtropical and temperate regions

Occurrence in Maldives: Planted in office premises and homesteads

Uses: An excellent ornamental tree. Wood is hard and durable. The plant has anti-ulcer, antimicrobial, neuro-protective, anti-depressant and anti-coagulant properties.



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Ardisia elliptica Thunb.



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Synonyms: *Bladhia elliptica* (Thunb.) Nakai, *Ardisia littoralis* Andr.

Family: Myrsinaceae

Local names(Dhivehi): Kashavaa, Keravaki

English names: Coral bush, Indian coralberry.

Description: Shrubs to small trees. Leaves simple, alternate, clustered towards the apex of the branches, 5-11×2.4-5 cm, obovate-oblong or elliptic, base cuneate, apex acute, coriaceous; petiole to 1 cm long. Inflorescence axillary or lateral umbels, rarely lengthened into racemes; peduncle 2-3 cm long. Flowers pink. Calyx 3-5 mm long; lobes elliptic, obtuse, with membranous margins, in fruit enlarged, orbicular, closely pressed to the berry. Corolla-lobes 5-7 mm long, obliquely ovate-acuminate, gland-dotted. Berry 5-7 mm across, apiculate, red turning purplish black.

Flowering & fruiting: July- November

Native range: South and Southeast Asia

Distribution: Introduced into Africa, America, the Caribbean Islands and Oceania

Occurrence in Maldives: Currently of rare occurrence in some of the southern islands

Uses: An ornamental plant and can be grown as a hedge. Fruits are edible. The leaves are traditionally used for alleviating chest pains, fever, diarrhea, inflammation and for parturition complications.

Threat and damage: The plant is considered as one of the 100 worst invasive alien species in the world. Its spread within the Maldivian islands need to be monitored.



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Areca catechu L.



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Synonyms: *Areca faufel* Gaertn., *Areca hortensis* Lour., *Areca cathechu* Burm.f

Family : Arecaceae

Local name (Dhivehi): Fen-foah

English names: Areca palm, Betel nut plam, Pinang

Description: Tall palms, stem erect, hooped, unarmed. Leaves in a terminal crown, to 2 m long; leaflets many, linear or linear-lanceolate, base narrow, apex praemorse; lower ones plicate; upper ones coherent. Spadices several on the axils of fallen leaves, to 50 cm long, branched, shortly peduncled; spikes flexuous or straight, to 30 cm long. Spathes boat-like, coriaceous. Flowers monoecious; lower ones female, 1-3 at spike-base; upper ones male, many. Male flowers ca. 3 mm long; sepals 3, ca. 1 mm long, triangular; petals 3, ca. 2.5 mm, ovate, white; stamens 6; pistillode 2-fid. Female

flowers ca. 1.3 cm long; sepals ca. 7 mm, obovate; petals to 1 cm; ovary to 8 mm, oblong, 1-celled, ovule solitary. Fruit to 4×2.5 cm, with fibrous mesocarps, orange-red in colour.

Flowering & fruiting: Through out the year

Native range: Southeast Asia

Distribution: Cultivated from India to the Solomon Islands and less commonly in Africa and tropical America

Occurrence in Maldives: Planted in some of the inhabited islands

Uses: Seed kernel (either raw or cured) is widely used in Maldives for chewing either singly or in combination with lime, betel leaves and tobacco. A decoction of roots is known to cure sore lips. The juice of tender leaves is mixed with oil and used as an embrocation in cases of lumbago. The nuts are cooling, astringent, diuretic, digestive, aphrodisiac and emmenagogue. The juice of tender nuts in small doses is a good laxative. The burnt nut is often used as dentifrice.



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Artabotrys hexapetalus (L. f.) Bhandari



Synonyms: *Annona hexapetala* L.f., *Artabotrys odoratissimus* R. Br.

Family: Annonaceae

Local name (Dhivehi): Champaapool

English name: Climbing ylang-ylang

Description: Woody climbers. Leaves alternate, 6-15×2- 4.5 cm, elliptic-oblong, acute at base, shortly acuminate at apex. Flowers solitary or paired on terminal or leaf opposed hooked peduncles, ca. 2 cm across, fragrant; pedicels ca. 1 cm long. Sepals ovate, recurved, 5-7.5×5-6 mm, pubescent. Petals lanceolate, saccate or concave at base; outer ones 2-3×0.5-0.7 cm; the inner slightly smaller. Stamens many, anthers beaked concealing the anther cells. Carpels many, oblong; ovules 2; stigma clavate. Fruitlets 14-20, ovoid, apiculate, 3-4 cm long; seeds brown

Flowering & fruiting: January- May

Native range: Tropical Asia

Distribution: Grown in the tropics

Occurrence in Maldives: Grown as an ornamental plant

Uses: The fragrant flowers are used to treat vomiting, itch, foul breath and leucoderma. A decoction of the leaf is a remedy for cholera and malaria.

Threat: The plant is listed as one of the worst invasive horticultural plants in Hawaii.



Artocarpus altilis (Parkinson ex F.A. Zorn) Fosberg



Synonyms: *Artocarpus communis* J. R. Forst. & G. Forst., *Artocarpus incisus* (Thunb.) L. f.

Family: Moraceae

Local name (Dhivehi): Ban bukeyo

English name: Breadfruit

Description: Evergreen trees, to 30 m high, exudate latex. Leaves simple, alternate, 10-60×8-30 cm, broadly ovate, pinnatifid, base decurrent, apex acuminate, lobes oblong, margin of each lobes entire or dentate-serrate, chartaceous, sericeous-pubescent along the nerves above, densely beneath; lateral nerves 8-12 pairs; stipule 10-25 cm long; petiole 3-6 cm long, stout, brown tomentose. Flowers unisexual; spikes on the main branches. Male catkin 8-20×1-2 cm, oblong-cylindric; perianth 2 mm, bilobed; stamen 1. Female spike 4-8×3-6 cm. Fruit a sorosis 15-20×10-15 cm, oblong or round, set with conical process; peduncle 4-12 cm; seeds 1.5-2.5 cm,

oblong-cylindric (seed formation is very rare).

Flowering & fruiting: January – June

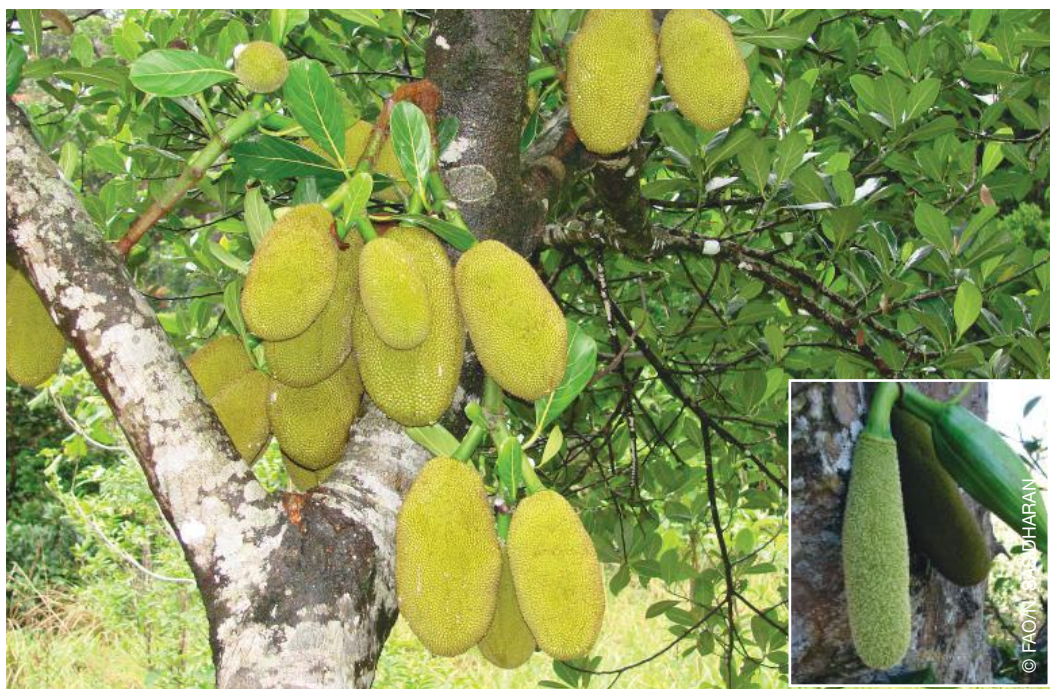
Native range: Pacific Islands

Distribution: Introduced and cultivated in the tropics and subtropics

Occurrence in Maldives: Very common in homesteads

Uses: Breadfruit is a staple component in the Maldivian diet. It can be cooked and eaten at all stages of development. Bondivi, a traditional sweet is made out of the fruit. Boiled fruit with tuna fish and coconut forms an appetising traditional food. Fruit chips are also used. Medically, the fruits are bitter, sweet, acrid, cooling, diuretic and appetiser. The latex is useful in external application for abscesses. The roots are useful in diarrhea and dysentery. Wood is very soft and light and hence mainly used to make boat parts, surfing boards and fish floats.

Artocarpus heterophyllus Lam.



Synonyms: *Artocarpus integrifolius* L. f.,
Artocarpus maximus Blanco

Family: Moraceae

Local name (Dhivehi): Sakkeyo

English name: Jack fruit tree

Description: Evergreen trees, to 30 m high, bark blackish-grey, exfoliating in large thick flakes; exudation milky white. Leaves simple, alternate, 8-23×3-13 cm, obovate or elliptic-ovate, base acute, apex acute or obtuse, shining above and scabrous beneath; lateral nerves 6-8 pairs; petiole 20-40 mm long, grooved above. Flowers unisexual, minute, yellowish-green, in spikes enclosed by spathe-like bracts. Male inflorescence from young branches, catkin narrow-cylindric; perianth 2-lobed, puberulous; stamen 1. Female catkins from the trunk and mature branches, more massive, perianth with strongly projecting conical apex. Fruit a sorosis, 30-60×20-40

cm, oblong, tuberculate, tubercles conical, yellowish-green, fruiting perianth yellow to light orange, fleshy; seeds 10-12×8-10 mm, elliptic-oblong, smooth, glossy.

Flowering & fruiting: November – April

Native range: Probably South India

Distribution: Widely cultivated in the tropics

Occurrence in Maldives: Occasional, grown in homesteads

Uses: Fruit flesh and seeds are used to prepare a variety of products like chips, jams, jelly, wine, squash, etc. Fruit flesh and seeds are also used to make curries. Ripened flesh is sweet and delicious. Timber is used for multi-purpose constructions. The roots are credited with antidiarrheal property and used internally in diarrhea. Leaves are used in fever, boils, wounds, skin diseases and as an antidote in snake bite. The unripe fruits are useful in dyspepsia and debility. The latex is useful in ophthalmitis.

Asplenium phyllitidis D. Don



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Synonyms: *Thamnopteris phyllitidis* (D. Don) C. Presl., *Neottopteris phyllitidis* (D. Don) J. Sm.

Family: Aspleniaceae

Local name (Dhivehi): Handifangivah

English name: Bird's nest fern

Description: Epiphytic herbs, rhizome erect, scales 8-12×2-4 mm, lanceolate, acuminate, fimbriate. Fronds 50-60×6-8 cm, simple; stipe 4-5 cm, stout; lamina coriaceous, narrowly oblanceolate, acute, midrib raised below; veins usually forked once near the midrib, straight, slightly ascending, uniting close to the margin. Sori 2-2.5 cm long, on alternative veinlets. Sporangial capsule subglobose. Spores black, planoconvex, monolete, with thickly folded lacinate perispore.

Reproductive structures: Sori are produced throughout the year

Native range: South and Southeast Asia

Distribution: Widely in the tropics

Occurrence in Maldives: Rare. Found only in a few uninhabited islands in the north and south

Uses: The plant is used for treating asthma, sores, weakness and halitosis. The young sprouts are eaten as a vegetable.



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Averrhoa bilimbi L.



Synonym: *Averrhoa abtusangulata* Stokes

Family: Oxalidaceae

Local names (Dhivehi): Bilamagu, Bilimagu

English names: Bilimbi, Cucumber tree, Tree Sorrel, Belimbing buloh

Description: Trees, to 6 m high; branchlets hispid. Leaves imparipinnate, alternate; leaflets 11-35, subopposite, 4-7×1.5-2 cm, oblong, ovate, ovate-lanceolate or lanceolate, base subtruncate, apex acuminate, glabrescent above, pubescent beneath, membranous, lateral nerves 5-10 pairs; rachis 17-57 cm long, stout, tomentose, swollen at the base. Flowers bisexual, reddish-brown, in densely clustered cauliflorous panicles; pedicel to 8 mm, articulated. Sepals 5, free, oblong, subequal. Petals 5. Stamens 10, in 2 unequal rows. Fruit a berry, 3-5×0.3 cm, oblong, greenish, with obtuse ridges; seeds up to 14.

Flowering & fruiting: March – May

Native range: Malaysia

Distribution: Introduced and cultivated in several tropical countries

Occurrence in Maldives: Common in homesteads

Uses: The fruit is used for making pickles and fish curry. It is also eaten raw with salt and spice. Overuse of the fruit may cause renal failure as it contains high levels of oxalate. The leaf paste is used to treat itches, swelling, rheumatism, mumps or skin eruptions. Fermented or fresh leaves are also used as a remedy for venereal diseases. The fruits are often employed to clean kris blades. Red flowers are ingredient of a natural red dye used in traditional textiles.



Averrhoa carambola L.



Synonym: *Averrhoa acutangula* Stokes

Family: Oxalidaceae

Local name (Dhivehi): Kaamaranga

English names: Star fruit tree, Carambola apple, Coromandel gooseberry,

Description: Trees, to 6 m high; branches often drooping. Leaves imparipinnate, alternate; rachis 8-20 cm long, slender, pubescent, swollen at the base; leaflets 7-11, subopposite, 1-7.5×0.7-4 cm, ovate, elliptic-ovate or lanceolate, base oblique, subacute or cuneate, apex acuminate, glaucous and pubescent beneath, chartaceous; lateral nerves 4-6, pinnate; rachis 17-57 cm long, stout, tomentose, swollen at the base. Flowers pink-purple, in axillary ascending panicles, to 12 cm long. Sepals 5, to 5 mm, oblong or ovate, red. Petals 5, to 8 mm, purple. Stamens 10, often 5 antheriferous, alternating with 5 staminodes. Fruit a berry, to 7×3 cm, oblong, with acute ridges; seeds up to 10, arillate.

Flowering & fruiting: May- August

Native range: Indonesia

Distribution: Introduced and cultivated in several tropical countries

Occurrence in Maldives: Common in homesteads

Uses: Fruits are edible and used to prepare pickles, squash, jelly, candy etc. Fruits are also used to treat diarrhea, vomiting, hyperdipsia, haemorrhoids, intermittent fever, hepatodynia, scabies and various kinds of poisoning and general debility. Unripe fruit is used to remove iron-rust from linen and to impart shine to brass vessels. Leaves are antipruritic, antipyretic and anthelmintic.



Avicennia marina (Forssk.) Vierh.



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Synonym: *Secura marina* Forssk.

Family: Avicenniaceae

Local name (Dhivehi): Baru

English name: Gray mangrove

Description: Much branched evergreen trees, to 10m high. Pneumatophores straight, pencil like, brown; branchlets more or less 4-angled, swollen at nodes. Leaves simple, opposite, decussate, to 7×4 cm; lamina lanceolate or elliptic-ovate, silvery white tomentose beneath; lateral nerves 4-7 pairs, parallel; petiole with a basal groove, having dark or black marginal hairs continuous in a line across the node. Flowers 5 mm long, bisexual, yellow, in axillary or terminal compound spikes; bracts and bracteoles persistent in the fruit. Calyx brownish-green, sepals 5, densely pubescent outside, persistent. Corolla yellow, glabrous within, fleshy, silvery pubescent outside, corolla tube 4-lobed. Stamens as many as corolla lobes; anthers bilobed. Ovary imperfectly unilocular; ovules 4, pendulous; stigma 2-lobed. Fruit a capsule, greenish, silvery tomentose; seed one.

Flowering & fruiting: March – July

Native range: Unknown

Distribution: Paleotropics

Occurrence in Maldives: Very rare. Only a few individual trees were observed

Uses: Wood is hard and durable, suitable for various construction purposes. Leaves are good fodder. Quality honey is obtained from this species. Bark yields a brown dye. Root and stem bark are used as aphrodisiac. The aqueous extract of the seed is used against sores. Unripe fruits are poulticed onto wounds and leaves onto skin ailments.



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Azadirachta indica A. Juss.



Synonym: *Melia azadirachta* L.

Family: Meliaceae

Local name (Dhivehi): Hithigas

English names: Indian lilac, Margosa tree, Neem, Nimbay, Pichumarda

Description: Evergreen trees, to 25 m high; bark greyish-brown, exudation red, sticky. Leaves imparipinnate, alternate; leaflets 7-15, opposite or sub-opposite, 4.5-7.5×1.5-2.5 cm, lanceolate or falcate, base oblique, apex acuminate, margin serrate; lateral nerves 10-18 pairs, pinnate, slender, prominent; rachis 14-30 cm long, slender, swollen at base. Flowers 8 mm across, white, in axillary panicles; pedicel 5 mm. Sepals 5, connate at base, ovate, margin ciliate. Petals 5, white, oblong-obovate, pubescent, spreading. Staminal tube 4 mm long, glabrous, apically 10 lobed; anthers 10, slightly exserted, opposite to lobes, sessile. Fruit a drupe, 1.5×0.5 cm, oblong-ovoid, greenish-yellow; seed one, surrounded by a sweet pulp.

Flowering & fruiting: February – September

Native range: Indian subcontinent

Distribution: Indo-Malaysia

Occurrence in Maldives: Common in most of the inhabited islands

Uses: A multipurpose tree. Timber is very hard and durable. The seed oil has pesticidal and medicinal properties. Oil cake is a good cattle feed, manure, insecticide and nematicide. The bark and leaves are useful in burning sensation, leprosy, skin diseases, leucoderma, dyspepsia, ulcers, tuberculosis, boils, eczema and malarial and intermittent fevers. Seeds are used as a remedy for tumours, leprosy, skin diseases, ulcers, constipation and diabetes.



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Bacopa monnieri (L.) Wettst.



Synonyms: *Lysimachia monnieri* L., *Gratiola monnieri* (L.) L.

Family: Scrophulariaceae

Local name (Dhivehi): Veppilaa

English names: Bacopa, Thyme leaved gratiola

Description: Aquatic or amphibious, semi-succulent, prostrate herbs; stem creeping, branches ascending. Leaves 1-1.5×0.4-0.6 cm, ovate-oblong or spatulate, rounded at apex, base narrowed, punctate above, thick, sessile. Flowers solitary, axillary; pedicels to 2.5 cm long. Calyx-lobes 5, unequal; outer calyx lobe ca. 5×4 mm, ovate, others slightly smaller. Corolla bluish-white, ca. 8 mm long, broadly campanulate, faintly 2-lipped; lobes 5, subequal. Stamens 4, didynamous. Ovary oblong-globose; style slightly deflexed. Capsule 3-4×1.5-2 mm, ovoid or oblong, enclosed in calyx; seeds ca. 0.5 mm long, oblong, reticulate.

Flowering & fruiting: Throughout the year

Native range: South Asia, Australia, Africa, Europe and South America.

Distribution: Paleotropics

Occurrence in Maldives: Occasional in marshy areas.

Uses: The plant is used in traditional medicine to treat epilepsy and asthma. It is also used as a remedy for biliousness, neuralgia, inflammations, insanity, amentia, tumours, bronchitis, skin diseases, syphilis, ulcers, elephantiasis, dysmenorrhoea, fever and general debility.



Barringtonia racemosa (L.) Spreng.



Synonyms: *Barringtonia apiculata* (Miers) R.Knuth, *Eugenia racemosa* L.

Family: Lecythidaceae

Local name (Dhivehi): Midhilijan

English names: Fish-killer tree, Freshwater mangrove, Putat kampung

Description: Small trees. Leaves alternate, crowded at apex, 15×4 cm, obovate, oval, tapering to base, glabrous and shiny; subsessile. Flowers in pendulous, mostly terminal, 25-30 cm long racemes; pedicels 10-15 mm; bracts triangular. Calyx with 2-5 unequal lobes. Petals 4, oblong or oblong-oval, to 3×2 cm, spreading, pink to red in colour. Stamens numerous in 5 or 6 whorls of which the innermost one is staminodal. Ovary 2-4 celled. Fruit ovoid, 5-8×2-4 cm.

Flowering & fruiting: August- March

Native range: Africa, temperate and tropical Asia, Australasia and the Pacific

Distribution: The tropics and subtropics

Occurrence in Maldives: Occasional along the sides of marshy areas

Uses: The leaves and bark are used to treat rat and snake bites. Fruits are used as a remedy for cough, asthma and diarrhea. Its roots act as a coolant and deobstruent.



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Barringtonia asiatica (L.) Kurz



Synonyms: *Barringtonia speciosa* J. R. Forst. & G. Forst., *Mammea asiatica* L.

Family: Lecythidaceae

Local names (Dhivehi): Kimbi, Kinbi

English name: Fish poison tree

Description: Trees to 25 m high with dense canopy and buttressed trunk. Leaves alternate, clustered at apex; lamina often 30-40×5-15 cm, oblanceolate, obtuse, narrowed at the base, quite entire, sessile. Racemes short, erect; lower pedicels with a leaf-like bract, upper bracts much smaller. Calyx lobes 2, 3 cm, oblong. Petals white, 4 or 5. Stamens very numerous, in many rows, connate below; filaments filiform all bearing anthers. Ovary 4-celled; ovules about 6 in each cell. Style often exceeding 10 cm. Fruit quadrangular or nearly ovoid, 1-seeded.

Flowering & fruiting: Throughout the year

Native range: Asia and the Pacific islands

Distribution: Coasts of the Western Pacific Oceans to India from Africa, India to Southeast Asia and Polynesia.

Occurrence in Maldives: Very common in most of the islands

Uses: A typical shade tree grown as a windbreak and wave barrier. Wood is soft and light and rarely used for construction. Seeds are used to get rid of intestinal worms and heated leaves are used to treat stomach ache and rheumatism. Flowers are reported to be a remedy for inflammation. Fruits are widely used as a fish poison.



***Basella alba* L.**



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Synonyms: *Basella rubra* L., *Basella cordifolia* Lam., *Basella nigra* Lour.

Family: Basellaceae

Local name (Dhivehi): Boamassaagu

English names: Indian spinach, Malabar spinach

Description: Twining fleshy herbs; stems terete, glabrous. Leaves to 5×4 cm, ovate, acute or obtuse, rounded at base, fleshy; petiole 1 cm long. Flowers in axillary, stout, erect, 3-10 cm long spikes; bracts ovate, bracteoles orbicular. Perianth calycine, lobes 5, 4 mm long, united at base. Stamens 5, antitepalous, free. Ovary glabrous, 1-celled; ovule 1, styles 3, stigma linear. Utricle globose, 5 mm across, fleshy, white, glabrous.

Flowering & fruiting: December- January

Native range: Tropical Asia and Africa

Distribution: Widely cultivated in tropical and temperate regions.

Occurrence in Maldives: Grown in home gardens

Uses: Young shoots are used as vegetable. The stem and leaves are useful to relieve burning sensation, constipation, ulcers, dysentery, balanitis, fatigue and general debility.



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Bauhinia purpurea L.



Synonym: *Phanera purpurea* (L.) Benth.

Family: Fabaceae - Caesalpinioideae

Local name (Dhivehi): Javvahiru

English names: Butterfly tree, Orchid tree

Description: Medium sized trees with spreading branches. Leaves alternate, to 7-18 cm long, rather longer than broad, 9-11 nerved, cleft about halfway down into 2 rounded lobes; petiole 2.5-5 cm long. Inflorescence few flowered panicles at the end of branches. Flowers pedicellate, pedicel 5-13 mm long. Hypanthium 7-10 mm long. Calyx 2.5-3.0 cm long, usually splitting into two reflexed segments, one emarginate the other 3 toothed. Petals 3.7-5 cm long, oblanceolate, long clawed, spreading, veined. Stamens usually 3 fertile, others reduced to antherless filaments. Ovary downy, long stalked; style long, stigma oblique. Pod 15-25×1.5-2 cm; stalk ca. 2 cm long; seeds 12-15, almost round, ca. 1.2-1.3 cm in diameter, brown, smooth.

Flowering & fruiting: September-December

Native range: South China, Southeast Asia

Distribution: Asia-Pacific region, north and central America, Africa and Australia.

Occurrence in Maldives: Occasional in home gardens

Uses: A beautiful evergreen ornamental tree. Plant parts are used to treat dropsy, pain, rheumatism, thigh swelling, convulsion, delirium and blackness of lip or tongue. Bark acts as an astringent in diarrhea and the decoction is used as a wash in mouth ulcers. Roots are carminative and the flowers laxative.



Bidens pilosa L.



Synonyms: *Bidens leucantha* (L.) Willd., *Bidens hirta* Jord.

Family: Asteraceae/Compositae

Local names (Dhivehi): Enbureymaa, Hirikulha

English name: Hairy beggarticks

Description: Erect herbs, stem quadrangular. Leaves opposite, 12–18 cm, pinnate; lobes to 6×3 cm, ovate-lanceolate, apex acute, base truncate, serrate, hairy. Heads to 1 cm across; peduncles to 8 cm, flexuous, involucre bracts biseriate, outer ca. 3×1 mm, linear, spatulate, inner to 5×2 mm, ovate, obtuse. Rays florets 2–5. Corolla bilobed, yellow; disc florets many. Achenes many ca. 2.5 mm; setae 2–4, ca. 3 mm long.

Flowering & fruiting: March–October

Native range: Temperate and tropical America

Distribution: Pantropical

Occurrence in Maldives: Very common in most of the islands, especially in open areas.

Uses: The plant is antidiarrheal and antimicrobial. Leaf paste is applied on cuts and wounds. Warmed juice of fresh plant is used to treat earache and conjunctivitis, and

as a styptic on wounds. Tender leaves are used as vegetable after processing.

Threat & damage: Bidens, an invasive species, form dense stands that compete, outgrow and eliminate crops and native vegetation. The leaf and root extracts suppress germination and seedling growth of native plants. The thickets affect recreation areas. The burr of seeds irritate people, sheep and other livestock and can also be a seed contaminant. The plant also acts as host and vector to harmful parasites such as root knot nematode and tomato spotted wilt virus.

Management: Hand pulling, knife weeding and treatment with herbicides are effective.



Boerhavia diffusa L.



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Synonyms: *Boerhavia adscendens* Willd.,
Boerhavia friesii Heimerl.

Family: Nyctaginaceae

Local names (Dhivehi): Burandha gondi,
Boduraalhu, Burandha

English names: Pigweed, Spreading hogweed,
Hogweed

Description: Herbs with long trailing branches and deep tap root; stem reddish, tomentose. Leaves simple, unequal, ovate, obtuse, undulate along margins, truncate to subcordate at base, tomentose, very variable in size; petiole to 1 cm long. Flowers 4 mm long, 4-10 together, in axillary or terminal peduncled umbels; bracts 5, ovate, glandular. Perianth pink. Stamens 3. Capsule 3×1 mm, clavate, 5-ribbed, glandular.

Flowering & fruiting: August – December

Native range: Africa, Asia and south and north America

Distribution: Pantropical

Occurrence in Maldives: Very common in most of the islands

Uses: The plant has several medicinal properties such as astringent, expectorant, emetic, febrifuge, cardiac stimulant, anti-inflammatory, diaphoretic, laxative and tonic. It is also used in treating all types of inflammations, strangury, scabies, jaundice, anaemia, dyspepsia, constipation, cough, bronchitis and general debility. The roots are used in the treatment of asthma, anaemia and internal inflammations.



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Boerhavia erecta L.



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Synonym: *Boerhavia elongata* Salisb.

Family: Nyctaginaceae

Local name (Dhivehi): Burandha filaa

English name: False hogweed

Description: Decumbent herbs. Leaves in unequal pairs, 2-4×1.2-3 cm, elliptic-ovate to ovate-lanceolate, base cuneate, apex acute to apiculate, subsucculent; petiole to 1.2 cm long. Panicle zig-zag, axillary and terminal; umbellules 2-4-flowered. Pedicels upto 6 mm long. Perianth white with pink stripes; tube 2-2.5 mm long. Stamens 1 or 3. Fruit ca. 2.5 mm long, obconic, apex truncate, the grooves between the ribs somewhat undulate.

Flowering & fruiting: July – February

Native range: West Asia, India and Myanmar

Distribution: Pantropical

Occurrence in Maldives: Common in open areas

Uses: The plant is anti-inflammatory, diuretic, expectorant, anticonvulsant, antimicrobial, antidiabetic and antifibrinolytic. It is also used in the treatment of jaundice and as a nutritional supplement.



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Bougainvillea spectabilis Willd.



Synonyms: *Bougainvillea bracteata* Pers.,
Bougainvillea speciosa Schnizl.

Family: Nyctaginaceae

Local name (Dhivehi): Boaganvilla

English names: Bougainvillea, Paper flower

Description: Straggling woody shrubs with strong thorns. Leaves alternate, to 11.5×9.5 cm, ovate-acuminate, entire; lateral nerves 5-6 pairs, glabrous; petiole to 2.5 cm long. Flowers in axillary cymes or panicles, in triads. Each flower is subtended by an ovate-acute, petaloid bract. Staminal filaments usually unequal, inflexed in bud. Ovary 1-celled; style filiform, stigma small; ovule solitary. Fruit indehiscent, enclosed in the hardened perianth tube.

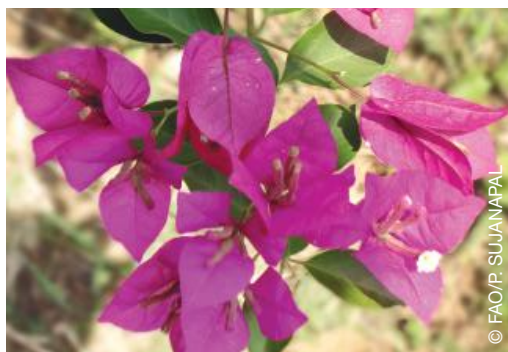
Flowering & fruiting: November – June

Native range: Brazil

Distribution: Widely grown in the tropics and subtropics as an ornamental plant

Occurrence in Maldives: Common in homesteads as an ornamental plant

Uses: Apart from its ornamental value, the plant has been reported to have anti-inflammatory, anti-microbial, anti-tumor, antidiabetic and anti-fertility properties.



Bruguiera cylindrica (L.) Blume



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Synonyms: *Rhizophora cylindrica* L., *Bruguiera malabarica* Arn.

Family: Rhizophoraceae

Local names (Dhivehi): Bodavaki, Kandoo

English name: Small leaved orange mangrove

Description: Trees, to 8 m high; underground roots produce numerous knee roots; bark cracked, lenticellate. Leaves simple, opposite, decussate, 4-13×2-5.5 cm, elliptic or oblanceolate, bronze-green coloured above, pale green beneath. Flowers greenish-white in axillary cymes, usually of 3-flowered, rarely 6-flowered; flowers sessile, rarely middle flowers pedicellate. Calyx tube, campanulate, greenish-white; lobes 6-9. Petals 6-9, free, white, apically bilobed, with a long bristle in the sinus between the lobes, lobes equal, tip more or less round with 3 or 4 cilia on each, margin densely hairy in the lower half and at the base except the stalk. Stamens 10, in pairs of unequal length. Fruit a drupe, reddish-green; seed one; hypocotyle cylindrical, green with brownish tinge.

Flowering & fruiting: December - October

Distribution: Asia-Pacific region

Occurrence in Maldives: A common true mangrove which occurs throughout the islands from north to south.

Uses: The plant produces quality tannin. The timber is hard, reddish and strong. The crushed bark has an unusual odour which is repulsive to fish and therefore the wood is not used for fish traps. Nevertheless, extracts from the pneumatophores are used in the manufacture of perfume. In Thailand, the bark is the source of a spice and the young shoots are consumed as vegetable. In traditional medicine, fruit skin is used to stop bleeding and the leaves to lower blood pressure.



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Bruguiera gymnorrhiza (L.) Lam.



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Synonyms: *Rhizophora gymnorrhiza* L.,
Bruguiera rheedei Blume

Family: Rhizophoraceae

Local name (Dhivehi): Bodu kandoo

English name: Large leaved orange mangrove

Description: Trees, to 7 m high; underground roots produce numerous knee roots; bark greyish to black, roughly fissured, lenticellate. Leaves simple, opposite, decussate, 6-17×3-7.5 cm, elliptic-oblong, reddish-green above, pale green beneath, stipulate. Flowers reddish-pink, 2.5-3.5×2.4 cm, solitary, axillary, drooping; calyx tube campanulate, red or dark pink, enclosing the ovary; persistent. Petals 12-16, free, shortly stalked, brown, deeply bilobed with a bristle in the sinus between the lobes; lobes equal, more or less round with 2-4 cilia on each, basal margin of the petals with dense stiff hairs;

stamens slightly unequal in length. Fruit a drupe 2-2.5 cm long, reddish-green; seed one; hypocotyle to 25×1.2 cm, cylindrical, with a blunt tip, brownish-green.

Flowering & fruiting: June – October

Native range: Southeast Asia, East Africa, North Australia and the South Pacific

Distribution: Micronesia, Samoa and the south-western Pacific from the eastern coast of Africa through Asia to subtropical Australia

Occurrence in Maldives: Fairly common in a few islands

Uses: The wood is used for construction purposes, furniture, house posts and pilings. Bark is reported to be astringent and used against diarrhea and fever. Cambodians use the bark for treating malaria. In folklore practice, the bark is utilized to flavour raw fish. The leaves and peeled hypocotyls are eaten in the Moluccas after soaking and boiling. Phlobaphene, the coloring matter obtained from the tree, is used in China and Malaysia for making black dye.



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Bruguiera sexangula (Lour.) Poir.



Synonyms: *Rhizophora sexangula* Lour.,
Bruguiera eriopetala Wight & Arn.

Family: Rhizophoraceae

Local name (Dhivehi): Bodaa vaki

English name: Golden orange mangrove

Description: Trees to 7 m high; underground roots produce numerous knee roots; bark grey to pale brown, with few large corky lenticels. Leaves simple, opposite, decussate, 8-13×4-6 cm, elliptic-oblong, reddish-green above, pale green beneath, stipulate. Flowers reddish-orange, 2.5-3.5 cm long, axillary, solitary, drooping. Calyx tube ribbed to the base, lobes 10-14, persistent. Petals 10-14, free, shortly stalked, white when young, changing gradually to brown, deeply bilobed with a bristle in the sinus between the lobes; tip acute with vestiges of 1-3 cilia on each, outer margin of the petal fringed from the base to the apex with dense, stiff, white, silky hairs. Stamens in pairs of unequal length. Fruit a drupe, reddish-green, 2-2.5 cm long; seed one; hypocotyle 10-15×1.2 cm, cylindrical with blunt tip, surface slightly ridged.

Flowering & fruiting: July – December

Native range: Asia-Pacific region

Distribution: Most countries in the Asia-Pacific region

Occurrence in Maldives: Very rare. Occurs in a few southern islands

Uses: Developing embryos and the fruits are cooked and eaten, after soaking. Juice from the fruits is used to treat sore eyes, shingles and burns. Roots and leaves are a remedy for burns. The timber, which is heavy, hard and strong, is utilized as poles and firewood and to make charcoal.



Bulbostylis barbata (Rottb.) C. B. Clarke



Synonyms: *Scirpus barbatus* Rottb., *Isolepis barbata* (Rottb.) R. Br.

Family: Cyperaceae

Local name (Dhivehi): Kaafaru hui

English name: Water grass

Description: Densely tufted annuals; culms erect, slender, 6-20 cm tall. Leaves 4-7 cm long, upto 0.5 mm wide, capillary to filiform, acuminate, scabrid towards apex; sheaths 0.5-1.5 cm long, brownish, with white long hairs at mouth. Inflorescence a terminal head, 6-12 mm across, brownish; bracts 1-3, 0.5-1.5 cm long, setaceous. Spikelets sessile, 3-7×1.5-2.5 mm, ovate-lanceolate, apex subacute. Glumes spiral, 2-4×1-2 mm, ovate-acute, strongly keeled, mucronate, keel scabrid, margins ciliate, 1-2 basal ones empty. Stamen 1-3. Style linear, broader at base; stigmas 3. Nut upto 1×0.5 mm, obovate, triquetrous, staminateous.

Flowering & fruiting: August – December

Native region: Unknown

Distribution: Africa, temperate and

tropical Asia, Australasia and southern and northern America.

Occurrence in Maldives: Common in open areas in most of the islands

Uses: In traditional medicine, a decoction of the plant is used to treat dysentery.



Caesalpinia bonduc (L.) Roxb.



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Synonyms: *Guilandina bonduc* L.,
Caesalpinia bonducella (L.) Fleming

Family: Fabaceae - Caesalpinioideae

Local name (Dhivehi): Kashi kaburan

English names: Bonduc nut, Fever nut,
Physic nut, Nicker nut

Description: Woody climbing shrubs; stems armed with recurved prickles. Leaves bipinnate, to 50 cm long; pinnae 4-5 pairs; leaflets 5-8 pairs per pinna, 2-5×0.8-2.2 cm, ovate or elliptic-oblong, base rounded, apex obtuse, mucronate; petiole to 15 cm long; stipules 0.8-1.7 cm long, foliaceous, lobed or pinnate. Racemes supra-axillary or terminal, many-flowered, to 15 cm long. Flowers to 1.5 cm across; pedicels 2-5 mm long; bracts 6-8×1-2 mm, lanceolate, caducous. Calyx lobes 5, separate almost to the base, 5-8 mm long, oblong or obovate, pubescent. Petals yellow as long as the sepals, oblanceolate, reflexed; upper one smaller. Stamens 10; filaments villous. Ovules 2. Pods 4.5-9×3.5-4.5 cm, elliptic,

turgid, beaked, covered with straight, puberulent spines; seeds 1 or 2, 1-1.5 cm across, subglobose, greyish-white, glossy.

Flowering & fruiting: March – May

Native range: Indian subcontinent, Indochina

Distribution: Pantropical

Occurrence in Maldives: Occasional in some of the islands

Uses: Seed and the root-bark are used to treat intermittent fevers. Seeds are useful to disperse swelling, restrain haemorrhage and keep off infectious diseases.



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Caesalpinia pulcherrima (L.) Sw.



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Synonym: *Poinciana pulcherrima* L.

Family: Fabaceae - Caesalpinioideae

Local name (Dhivehi): Fathangumaa

English names: Dwarf Poinciana, Barbados pride, Peacock flower, Gold mohur

Description: Shrubs to 5 m tall, branches many. Leaves bipinnate; rachis 20-30 cm long; pinnae 4-8 pairs; leaflets 6-8 pairs on each pinna, 1-2×0.5-1.2 cm, elliptic to obovate, base cuneate, apex rounded or emarginate; stipules, ca. 2 mm long, subulate, caducous. Flowers in terminal corymbose racemes, 20-50 cm long; pedicels 3-7 cm long. Calyx 1-1.5 cm long, outer lobe cucullate, enclosing the flower bud. Petals 1.5-2.5 cm long, subequal, commonly flame-red but sometimes yellow. Stamens 10; filaments reddish, 0.5 cm long, exserted. Pods 6-12×1.5-2 cm, obliquely oblong, compressed, short-stipitate, beaked at apex, 8-10-seeded. Seeds 8-10×6-8 mm, obovate, compressed, black.

Flowering & fruiting: Through out the year
Native range: Probably West Indies and Mexico

Distribution: Widely cultivated

Occurrence in Maldives: In homesteads as an ornamental plant

Uses: Apart from its high ornamental value, the plant is useful in the treatment of fever, jaundice, kidney disease and gastrointestinal disorders.



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Caesalpinia sappan L.



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Synonym: *Binacaea sappan* (L.) Tod.

Family: Fabaceae - Caesalpinioideae

Local name (Dhivehi): Beys fathangu

English names: Brazil wood, Sappan wood

Description: Trees, to 8 m high, sparsely armed with short straight or recurved prickles. Leaves bipinnate, alternate; rachis 20-40 cm long; pinnae 10-14 pairs, 2.5-10 cm long, spiny between pinnae pairs; leaflets 20-40, opposite, sessile, 1-2.5×0.5-1 cm, oblong, base oblique, obtuse, apex obtuse; lateral nerves 5-15 pairs; stipules spiniform, to 3-5 mm long. Flowers bisexual, yellow, in supra-axillary and terminal racemes; pedicels 1-2 cm long. Sepals 5, unequal. Petals 5, orbicular, subequal, with red spot at the base. Stamens 10, declinate, densely woolly at base. Fruit a pod, 7-10×3-4 cm, obliquely oblong, black, glabrous; seeds black, oblong or ellipsoid.

Flowering & fruiting: August – December

Native range: Myanmar, India, Malaysia,

China and Thailand

Distribution: Indo-Malaysia and the United States of America

Occurrence in Maldives: Occasional in homesteads

Uses: The heart wood yields a quality dye and decoction of the wood is considered a powerful emmenagogue and useful in skin diseases, haemorrhages and disturbance of menstrual functions. It is also considered as astringent and sedative and cures biliousness, fever, delirium, ulcer, strangury and urinary concretions.



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Cajanus cajan (L.) Millsp.



Synonyms: *Cytisus cajan* L., *Phaseolus balicus* L.

Family: Fabaceae - Papilionoideae

Local name (Dhivehi): Mugu tholhi

English names: Congo pea, Pigeon-pea, Red gram

Description: Shrubs; stems ribbed. Leaves alternate, trifoliolate; leaflets 5-13×1.5-6 cm, elliptic to lanceolate, lateral ones obliquely elliptic. Flowers in axillary pseudo-racemes, rarely also terminal. Calyx golden tomentose and glandular, persistent in fruit. Standard petal yellow, 12-17 mm long, often reddish-lined or orange to purple externally; wings yellow, keel yellowish-green tinged orange to purple. Stamens diadelphous, anthers uniform. Pods 4-10×0.5-1 cm, yellow or green striped with maroon or dark purple, straight

to sickle-shaped, glandular pubescent; seeds 2-9, cream or reddish brown, slightly laterally flattened, 4-9×3-8 mm.

Flowering & fruiting: December- March

Native range: Uncertain - most likely Asia

Distribution: Worldwide, widely cultivated

Occurrence in Maldives: Grown in homesteads

Uses: Pigeon pea is a popular food in tropical countries. It is used for various other purposes such as medicine, fodder and as a nutrient cycler. The leaves are used as a remedy for oral ulcers, odontogingivitis, strangury and inflammations. The seeds are taken to get relief from intestinal worms, haemorrhoids, fever and cardiac disease. The leaves and seeds when applied as a poultice over the breast may induce lactation.

Calophyllum inophyllum L.



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Synonyms: *Calophyllum bingator* Roxb.,
Calophyllum blumei Wight

Family: Clusiaceae

Local name (Dhivehi): Funa

English names: Alexandrian laurel, Beauty leaf, Dilo oil tree, Indian laurel, Oil-nut Tree.

Description: Trees, to 20 m tall; bark blackish-brown, deeply fissured and cracked; exudate milky-yellow. Leaves simple, opposite, 6-15×3-10.5 cm, broadly elliptic-oblong, base cuneate to rounded, apex rounded or retuse, slightly recurved, lateral nerves many, parallel, close, slender; petiole 10-30 mm. Racemes axillary, 5-12 cm long, 5-12 flowered. Flowers 2-2.5 cm across, white, fragrant; bracts ovate, caducous. Sepals 4, reflexed, petaloid, nerved. Petals usually 4, rarely 3 or 5, obovate to elliptic, reflexed, nerved. Stamens many, filaments connate into 4-6 bundles, cream coloured. Fruit a drupe, globose to obovoid, 2.5-5×2.5-4 cm, smooth; stone subglobose, to 2 cm across.

Flowering & fruiting: December – August

Native range: Tropical Asia and the Pacific

Distribution: Widely distributed and cultivated throughout the tropics from West Africa to the Pacific Islands.

Occurrence in Maldives: Common in most of the islands

Uses: A multipurpose tree. The wood which is hard and strong is used in construction and boat building. Neoflavonoid, a medicinally important polyphenolic compound was first isolated from the seeds of this tree. The oil extracted from the seeds is widely used as biodiesel. The seed oil is also anti-inflammatory, anti-cancerous, skin tonic, vulnerary and a deodorant.



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Calotropis gigantea (L.) Dryand.



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Synonym: *Asclepias gigantea* L.

Family: Asclepiadaceae

Local name (Dhivehi): Ruva

English names: Bowstring hemp, Crown flower, Giant calotrope, Milkweed, Madar.

Description: Shrubs with pale greyish shoots, exudation milky. Leaves simple, opposite, 10-16×8-10 cm, smaller in branchlets, elliptic-ovate to obovate, apex acute or obtuse, base cordate; lateral nerves 5-7 pairs, adpressed, pubescent when young, becoming glabrous on maturity. Flowers pale purple or greenish-white, 3 cm across; pedicels to 3 cm long, stout. Calyx lobes to 3 mm long. Corolla campanulate, tube short, lobes ovate to oblong, recurved. Staminal corona of 5 vertical lobes, 1 cm long. Carpels free. Fruit saccate, to 6×3 cm, ovoid; seeds many, silky, commate at one end.

Flowering & fruiting: Throughout the year

Native range: Cambodia, Indonesia, Malaysia, Philippines Thailand, India, China, Pakistan, Nepal, Sri Lanka and tropical Africa.

Distribution: Tropical Asia and Africa

Occurrence in Maldives: Common in open areas

Uses: The root bark is a substitute for 'ipecacuanha' a drug containing the alkaloid ceretin. The root bark is febrifuge, anthelmintic, laxative and is useful in cough, cutaneous diseases, intestinal worms, ascites and anasarca. The powdered root promotes gastric secretions and is useful in asthma, bronchitis and dyspepsia. The leaves are useful in the treatment of paralysis, swellings and intermittent fevers.



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Canavalia cathartica Thouars



Synonyms: *Canavalia virosa* (Roxb.) Wight & Arn., *Dolichos virosus* Roxb.

Family: Fabaceae - Papilionoideae

Local name (Dhivehi): Maa foavvalhihimeri

English name: Maunaloa

Description: Perennial climbers; stems sparsely pubescent or glabrous. Leaves trifoliate; leaflets 6-12.5×4.2-8 cm, broadly ovate to suborbicular, base broadly cuneate to rounded, apex abruptly acute to acuminate, sparsely pubescent or glabrous. Racemes axillary, to 25 cm long, pendant, tuberculate. Flowers 2.5-3 cm long; pedicles ca. 2 mm long. Calyx tube 8-10 mm long, puberulent, the upper lobes rounded. Corolla pink; standard, 2.5-3 cm long, obovate or suborbicular; wings and keels lanceolate, claws ca. 5 mm long. Pods 7-12×3-4 cm, oblong, turgid, 6-8 seeded; seeds ca. 1.5 cm long, oblong-ellipsoid, reddish-brown.

Flowering & fruiting: September–December

Native range: Unknown

Distribution: Paleotropical, also widely cultivated

Occurrence in Maldives: Occasional along seashores

Uses: The immature fruits and seeds are used as famine food, especially in coastal regions. It is a good fodder for cattle. The plant is reported to be a remedy for cough and vitiated conditions of Kapha.



Carica papaya L.



Synonyms: *Papaya carica* Gaertner, *Carica citrifomis* Jacq.

Family: Caricaceae

Local name (Dhivehi): Falhoa, Veyo falho, Rangu falho, Ran falho

English names: Pappaya, Papas, Papaw tree

Description: Tall herbaceous trees with white milky latex. Trunk with scars of fallen leaves. Leaf blade 30-60 cm long, deeply divided into several lobes which are again divided into smaller lobes with acute apex; petiole 40-100 cm long, 1-3 cm in diameter. Plants mostly dioecious, rarely monoecious with fragrant, nocturnal flowers. Male inflorescence 30-100 cm long pendulous racemes. Flowers in clusters, sessile, 1.5-2 cm across and 3-6 cm long. Corolla tube 3-6 cm long, 5-lobed, twisted in bud, lobes ca. 1×0.5 cm long, creamy yellow. Stamens 10, in two whorls, outer whorl of the stamens shortly stalked, anthers 1.5-2 mm long, 2-celled, dehiscing longitudinally, basifixed. In female plants, 2-4 floral bud arise in the leaf axil, one of which becomes a complete flower; other floral buds fall off, flowers seem to be solitary axillary. Peduncle short, 1-2 cm long. Bracts fleshy, leaf, 1-2 cm long, caducous. Calyx united, 5-lobed, 5-8 mm long, acute,

green and fleshy. Petals 5-6.5×1.6-1.8 cm, lanceolate, obtuse, some plants with female inflorescence, producing elongated and smaller fruits. Fruits large, spherical or pyriform, usually 20-30×8-15 cm, turning yellow or orange with yellow or orange flesh when ripe. Seeds black, wrinkled, each enclosed in a gelatinous membrane, oval in shape, ca 3 mm in diameter.

Flowering & fruiting: Throughout the year

Native range: Tropical America

Distribution: Cultivated widely in the tropics and subtropics

Occurrence in Maldives: Very common in homesteads

Uses: A major fruit crop. The un-ripe fruits are acrid, bitter, anodyne, aphrodisiac, appetiser, anti-inflammatory, demulcent and diuretic. They are used as a remedy for dyspepsia, anorexia, intestinal worms, bronchitis, haemorrhoids, inflammations, skin diseases, urinary calculus and injuries of the urinary tract. The latex is used to treat round worm infestation, constipation, skin diseases, leprosy, fever and general debility.

Caryota urens L.



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Synonym: *Corypha guineensis* L.

Family: Arecaceae

Local name (Dhivehi): Moahi

English names: Elephant's palm, Fish-tail palm, Indian sago palm, Jaggery palm, Toddy palm

Description: Monoecious, stout, palms, 16-20 m tall, 30-50 cm diam., trunk smooth with prominent annular leaf-scars. Leaves bipinnate, 4-6 m long; pinnae 5-7 pairs, to 1.5 m long; leaflets broadly cuneate, fan-shaped, 12-20 cm long, 7-10 cm wide at wider portion, raemorse at apex, many ribbed. Spadix interfoliar, shortly peduncled, much branched, pendulous, to 4 m long; spathes few, 40-50 cm long. Flowers many, in triads with female flower in the middle. Sepals 3, rounded, imbricate. Petals linear-oblong, valvate. Stamens many. Ovary 3-celled, 3-gonous; ovule 1-per locule. Fruit ca. 2 cm across, globose, reddish purple; seeds plano-convex, subreniform.

Flowering & fruiting: January – April

Native range: India, Malaysia, Myanmar, Nepal, Sri Lanka

Distribution: As exotic in Papua New Guinea, Thailand and Vietnam

Occurrence in Maldives: Occasional in homesteads.

Uses: The tender leaves are sweet and cooling, and useful in digestive and metabolic problems (pitta in Ayurvedic medicine). The pulp of the fruit is good for hyperdipsia and fatigue. A paste made from the nut is good for hemicrania. Toddy is extracted from the inflorescence.



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Cassia fistula L.



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Synonym: *Cassia rhombifolia* Roxb.

Family: Fabaceae - Caesalpinioideae

Local name (Dhivehi): Anmalthassh

English names: Indian laburnum, Golden shower, Purging cassia, Purging fistula

Description: Deciduous trees, to 15 m high, bark surface pale when young, exfoliating in hard scales in mature plants. Leaves paripinnate, alternate; rachis 14.5–36 cm, pulvinate; leaflets 6–16, opposite, 5–18.5×3–6.5 cm, ovate, ovate-lanceolate or oblong-ovate, base obtuse, round or acute, apex acuminate, glabrous above, glaucous and puberulent beneath; lateral nerves 9–25, prominent. Flowers 3.7–5 cm across, yellow, in axillary drooping racemes; pedicels 3–7 cm. Calyx tube short, lobes 5, 1×0.6 cm, ovate, apex obtuse, reflexed. Petals 5, 2.5×1.5

cm, obovate, subequal, clawed. Stamens 10, upper 3 short with erect filaments to 7.5 mm; lower 3 large with curved filaments, to 3 cm; medium 4 with erect filaments to 1 cm. Fruit a pod 30–60×1.2–1.6 cm, cylindrical, black, shortly stipitate, indehiscent, woody, transversely septate; seeds 25–100, 6–8 mm broad, ovoid, pale brown, immersed in pulp.

Flowering & fruiting: February–September

Native range: Southeast Asia

Distribution: Southern Pakistan, India, Myanmar, Thailand and Sri Lanka

Occurrence in Maldives: Common in most of the inhabited islands.

Uses: A multipurpose tree. The roots, bark, flowers and fruits are all medicinal. They are mainly used as a remedy for skin diseases, burning sensations, fever, diabetes (bark) rheumatism, gout, anorexia, jaundice and cardiac disorders (fruits).



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Cassytha filiformis L.



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Synonyms: *Calodium cochinchinensis* Lour.,
Cassytha americana Nees

Family: Lauraceae

Local names (Dhivehi): Velanbuli, Umbulivella

English name: Love vine

Description: Leafless parasitic twiners, stem wiry, yellow. Spikes terminal or axillary; peduncle 2-4.5 cm; bracteoles 3, ovate, 1.2 mm, ciliate. Flowers sub sessile, in spikes, 3-merous, bisexual, 3 mm across. Tepals 6, free, unequal, 3+3, truncate, obtuse; outer lobes ovate-orbicular, 1.2 mm, ciliate; inner lobes obovate, 2.5 mm. Fertile stamens 9; filaments 1.5 mm; glands sessile; anthers 2-celled, 1.5 mm; staminodes 3, to 1 mm. Ovary 1.5 mm; style 0.5mm; stigma capitate. Drupe globose, enclosed within inflated perianth, crowned by lobes; seed 1.

Flowering & fruiting: August–September

Native range: Pantropical

Distribution: Pantropical

Occurrence in Maldives: Very common and dense in almost all the islands – highly invasive.

Uses: The plant is reported to have aphrodisiac properties, hence the name love vine. It is a remedy for urethritis and skin diseases.

Threat & damage: The plant smothers native shrubs and trees.

Management: Removal of the plants before they produce seeds is helpful. Use of herbicides is also effective in managing *Cassytha*.



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Casuarina equisetifolia L.



Synonyms: *Casuarina africana* Lour., *Casuarina indica* Pers.

Family: Casuarinaceae

Local name (Dhivehi): Fithuroanu

English names: Beefwood tree, Beach she-oak, Horsetail tree, South Sea ironweed

Description: Dioecious trees, to 30 m high, bark brown, rough, peeling off in vertical strips branchlets to 15 cm, arising from the axils of small, recurved scales, ribbed. Leaves scaly, about 7 at a node, alternating with the ribs of the upper node, 0.5-1 mm long, acute. Flowers in spikes; male flowers in terminal spikes, pendulous, brown, of 3-6×0.3 cm. Female flowers in axillary spikes of 0.4-0.8×0.3-0.4 cm, solitary or in pairs, condensed into an ovoid cone, shortly stalked. Fruit a carpophore, 1.5-3×1-2 cm, ovoid or oblong-cylindric; nutlets compressed; seeds winged.

Flowering & fruiting: Throughout the year

Native range: Australia and Southeast Asia

Distribution: Asia, Africa, south, central and north America, Europe and Oceania.

Occurrence in Maldives: Common in most of the inhabited islands

Uses: The wood is used for boat building,

fencing, as a support and as firewood. The tree is generally grown as a wind break and for erosion control. The astringent bark extract is used as a remedy for diarrhea and sore throat.

Threat & damage: *Casuarina* produces dense shade; its thick blanket of leaves and hard pointed fruits cover the ground under it and prevent germination and growth of native species. Also, dense thickets of the tree displace native dune and beach vegetation including mangroves. Once established, the tree radically alters the light, temperature and soil chemistry regimes of beach habitats. The pollen may cause allergic reaction in humans.

Management: Seedling and saplings are best removed by up-rooting. Herbicide applications on cut ends of trees are effective in killing small trees. Biocontrol methods are also known.



Catharanthus roseus (L.) G. Don



Synonyms: *Vinca rosea* L., *Lochnera rosea* (L.) Rchb.

Family: Apocynaceae

Local name (Dhivehi): Malikuruva

English names: Periwinkle, Rose periwinkle, Madagascar periwinkle, Vinca

Description: Perennial woody herbs. Leaves simple, opposite, decussate, 3-6×1.5-2.5 cm, elliptic-obovate, apex obtuse or rounded, base cuneate, glabrous; lateral veins ca. 10 pairs, chartaceous; petiole to 1.3 cm long. Flowers axillary, solitary or paired, shortly pedicellate. Calyx-lobes 5, subequal, 3-5 mm long, subulate. Corolla pink or white, tube 2-3 cm long, pubescent without; lobes 5, 1.5-2×1-1.5 cm, triangular-obovate, obtuse. Stamens 5, included. Ovary ca. 4 mm long; style to 3 cm long. Follicles 2-3×0.2-0.3 cm, linear, puberulous; seeds many, black.

Flowering & fruiting: August – January

Native range: Madagascar

Distribution: China, India, USA, Cuba

Occurrence in Maldives: In homesteads as ornamental plant.

Uses: The whole plant contains alkaloids which have hypotensive, sedative and tranquillising properties and is used as a folk remedy for diabetes. The root is toxic, bitter, acrid, stomachic and tonic. The juice from leaves is good for wasp-stings and menorrhagia. The anticancer drugs namely 'vincristine' and 'vinblastine' are extracted from this plant.

Threat & damage: *Catharanthus* has been observed to spread as an invasive species in some of the Islands. It can have negative impact on native flora and fauna.



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Cayratia trifolia (L.) Domin



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Synonyms: *Vitis trifolia* L., *Causonis trifolia* (L.) Raf.

Family: Vitaceae

Local name (Dhivehi): Kudhimarifai

English names: Fox grape, Bush grape

Description: Glabrous tendril climbers; tendril simple, bifid or more branched. Leaves 3-foliolate; leaflets 2.5-6×2-3.5 cm, ovate or elliptic, margin serrate, thinly coriaceous. Inflorescence an umbellate or corymbose cyme, axillary; peduncle to 8 cm long. Flower small, greenish-white. Calyx lobes 4. Petals 4, disk white. Stamens 4. Fruit a berry, to 1 cm across, depressed globose, dark purplish-black; seeds 1-4, pyriform.

Flowering & fruiting: Throughout the year

Native range: Indo-Malaysia, China and Australia

Distribution: Asia and Australia

Occurrence in Maldives: Occasional in mangrove habitats in some northern islands

Uses: The plant is considered an astringent, diuretic, antibacterial, antiscorbutic, antitumor, hypoglycemic and rubefacient. Infusion of seeds with the extract of its tuber is used as a remedy for diabetes.



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Celosia argentea L.



Synonyms: *Amaranthus cristatus* Noronha, *Lophoxera comosa* Raf.

Family: Amaranthaceae

Local name (Dhivehi): Makhumaa

English names: Quail grass, Silver spiked cockcomb

Description: Erect herbs. Leaves simple, alternate, 2-15×0.1-3.2 cm, lanceolate-oblong, acute to obtuse; petiole to 2 cm long. Inflorescence terminal, dense many-flowered spikes, 2.5-20×1.5-2.2 cm, white to pink. Perianth segments 6-10 mm. Anthers and filaments creamy to magenta. Ovary 4-8-ovulate, style filiform, 5-7 mm long; stigma 2-3, very short. Capsule 3-4 mm, ovoid to globose; seeds ca. 1.25-1.5 mm, lenticular, black, shining, very finely reticulate.

Flowering & fruiting: September – January
Native range: Asia

Distribution: Cosmopolitan

Occurrence in Maldives: Common in open areas, especially in abandoned agricultural areas.

Uses: An ornamental. The leaves and tender shoots are edible. The flowers and seeds are astringent, haemostatic, ophthalmic, parasitidal and poultice.



Cerbera odollam Gaertn.



Synonyms: *Odollamia malabarica* Raf., *Cerbera dilatata* Markgr., *Cerbera forsteri* Seem.

Family: Apocynaceae

Local name (Dhivehi): Boadhumburi

English names: Dog-bane, Sea mango, Pong pong tree

Description: Small evergreen trees; bark greenish-brown, latex milky. Leaves simple, alternate, crowned at the apex of branches, 10-25×2.5-6.5 cm, lanceolate or oblanceolate; base cuneate or attenuate; apex acuminate or acute; margin entire, bright green and shiny; lateral nerves many, close; petiole 8-35 mm long, slender, glabrous. Flowers bisexual, 5 cm across, white, in pseudoterminal cymes. Calyx lobes 5, linear, recurved. Corolla lobes 5, tube funnel-shaped above the throat with 5 villous scales. Stamens 5, small, included, anthers lanceolate, apiculate. Carpels 2, free, ovules 4 in each cell on both sides of thick placenta. Fruit a drupe, globose or ellipsoid, pericarp green turning rose; seeds 1 or 2, compressed.

Flowering & fruiting: July- November

Native range: Indian subcontinent, Indochina, Malaysia and the Pacific

Distribution: Paleotropics

Occurrence in Maldives: Fairly common in some of the islands

Uses: All parts of the plant, especially fruits, are poisonous. The bark, leaves fruits and latex are used as a remedy for rabies, skin diseases and ringworm. The fruits are used for manufacturing bioinsecticides and deodorants.



Ceriops tagal (Perr.) C.B. Rob.



Synonyms: *Rhizophora tagal* Perr., *Ceriops candolleana* Arn.

Family: Rhizophoraceae

Local name (Dhivehi): Karamana

English name: Yellow mangrove

Description: Trees, to 10 m high, with stilt roots from lower part of stem. Leaves simple, crowded at apex of branches, 5-10×2-7cm, obovate-oblong, margins wavy, yellowish-green; petiole to 2 cm. Flowers 6-8 mm long, white, becoming brown later, shortly pedicellate; peduncle to 1 cm long, 4-10-flowered. Calyx-tube 5 lobed, triangular-ovate, upright in flower, acute. Petals 5, oblong, basally coherent by hooked hairs, beset with 3 clavate appendages at the truncate apex; disc 5-lobed. Fruit ovoid, 1.5-2.5 cm long, crowned by reflexed calyx lobes; hypocotyle distinctly ridged, to 25 cm long.

Flowering & fruiting: October – December

Native range: Asia-Pacific

Distribution: Asia, Australasia, East Africa

and the Middle East

Occurrence in Maldives: Rare, restricted to some islands

Uses: The wood is more durable compared to other mangroves. Bark is used for tanning, source of a black dye and in lotions for malignant ulcers. Treating nets and sails with the bark extract is known to protect them from decay. The fruit is reported to be an astringent and a folk remedy for malaria and sores. In Philippines, the bark is also used to cure diabetes.



Cissus quadrangularis L.



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Synonyms: *Cissus quadrangula* L., *Vitis succulenta* Galpin

Family: Vitaceae

Local name (Dhivehi): Kashikafa

English names: Adament creeper, Bone setter, Edible-stemmed vine

Description: Rambling, succulent shrubs; stem 4-angular, winged or ridged at angles, constricted at nodes; tendrils simple. Leaves simple, entire or 3-lobed, 2-5×2-5 cm, ovate-suborbicular or subreniform, base truncate, margin distantly spinulose-crenate, apex obtuse, thick-coriaceous; petiole to 1 cm long. Flowers in leaf-opposed umbellate cymes. Calyx-tube obscurely 4-lobed, reddish. Petals ovate, acute, greenish-yellow. Stamens 4; anthers yellow. Disk yellow. Ovary ca. 1mm long. Berry ca. 7 mm across, subglobose; seeds black, smooth.

Flowering & fruiting: June - January

Native range: Probably Bangladesh, India and Sri Lanka

Distribution: Widespread in the drier parts of Africa, Arabia and Indo-Malaysia

Occurrence in Maldives: Grown in homesteads and agricultural areas

Uses: A well known bone setter. The plant is known to have antibacterial, antifungal, antioxidant, anthelmintic and analgesic properties.



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Citharexylum spinosum L.



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Synonyms: *Citharexylum cinereum* L.,
Citharexylum subserratum Sw.

Family: Verbenaceae

Local name (Dhivehi): Boa handhuvaree

English names: Fiddlewood, Spiny fiddlewood

Description: Shrubs to small trees; up to 10 m tall, branchlets 4-angular, sometimes spiny. Leaves decussate-opposite, alternate or subopposite, to 15×6 cm, elliptic to oblong-elliptic, acute, entire or dentate, usually with a pair of glands at base of lamina; petiole 0.5-1.5 cm long. Inflorescence axillary and terminal, racemiform or spicate, drooping; flowers many. Calyx cupular 5-lobed. Corolla white, 0.8-1 cm across, infundibular or hypocrateriform, usually 5-lobed, rarely 4 or 6 lobed, lobes slightly irregular; tube narrow, cylindrical. Stamens 4. Ovary 4-loculed; ovule 1 in each locule; style terminal; stigma shortly 2-lobed. Fruit a drupe, partly enclosed by the enlarged calyx; pyrenes 2-loculed, 2-seeded.

Flowering & fruiting: April – September

Native range: The United States (Florida),

West Indies, South America

Distribution: Introduced and naturalised in many other countries especially Australia, Fiji, French Polynesia and New Caledonia

Occurrence in Maldives: Common in homesteads as an ornamental plant

Uses: The wood, which is close-grained and hard is used for general construction purpose, making furniture and musical instruments. A decoction using young twigs is used in treating thrush in children.

Threat & damage: The tree is invasive in habit and hence growing it for ornamental purposes may be restricted.



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Citrullus lanatus (Thunb.) Matsum. & Nakai



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Synonyms: *Anguria citrullus* Mill., *Momordica lanata* Thunb.

Family: Cucurbitaceae

Local name (Dhivehi): Karaa

English name: Watermelon

Description: Long twiners, stem angular, villous, tendrils bifid. Leaves simple, alternate, to 14×10 cm, deeply 3-5-lobed, villous; petiole to 10 cm long. Flowers axillary, solitary; peduncle 1-3 cm long in male, 2-6 cm long in female, villous. Calyx-tube to 4 mm, equal to lobes. Corolla lobes 1-1.5×0.3-4 cm, ovate, villous, yellow. Stamens 3, inserted at the base of calyx tube; filaments in male free. Ovary ovoid. Fruits to 20 cm across, subglobose; seeds many, smooth, black, ovoid, compressed.

Flowering & fruiting: June-January

Native range: Tropical Africa

Distribution: Widely cultivated in tropical regions

Occurrence in Maldives: Cultivated in almost all the inhabited islands

Uses: Cultivated for its delicious fruit. The fruits and seeds are demulcent, diuretic and tonic. The rind of the fruit is prescribed in cases of alcoholic poisoning and diabetes. The root is purgative and in large dose is said to be an emetic.



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Citrus aurantifolia (Christm.) Swingle



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Synonyms: *Limonia aurantifolia* Christm., *Citrus acida* Pers.

Family: Rutaceae

Local name (Dhivehi): Lunboa

English names: Bitter orange, Country lime, Key lime, Mexican lime, Seville orange

Description: Shrub or small trees, to 6 m high; branchlets slender with sharp spines. Petioles narrowly winged; leaflets ovate-oblong, rounded at the base, crenate at margin, acute at apex. Inflorescences lax axillary racemes, 2-7 flowered, rarely flower solitary. Flowers bisexual, 20-25 cm across, whitish. Calyx cupular, greenish white; lobes 4, deltoid, glandular. Petals 4, oblong, glandular, white. Stamens 20-28; filaments polyadelphous, white; anthers oblong, yellowish. Ovary globose-depressed, greenish; style cylindrical, white; stigma capitate. Fruits rounded to oval or elliptical,

4-6.5×3.5-5 cm, pitted, glandular, shining, green, yellow when ripe; seeds ovoid.

Flowering & fruiting: March-December

Native range: Native of Southeast Asia, probably Indonesia and Malaysia

Distribution: Cultivated in tropical areas from the West Indies and Central and South America to India, China and parts of Africa.

Occurrence in Maldives: Cultivated in homesteads

Uses: The edible fruit, which has a sour and acidic flavour, is widely used for making juice, jams, pickles and chutneys. The juice is low in calories but high in vitamin C and is a part of cocktail beverages. The aromatic leaves are often used as a seasoning in Asian cooking. Lime juice is utilized in traditional medicine to relieve stomach ache and as an antiseptic.

Citrus aurantium L.



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Synonym: *Citrus humilis* (Mill.) Poir.

Family: Rutaceae

Local name (Dhivehi): Naaringu

English names: Bigarade, Sour orange

Description: Shrubs or small trees, to 9 m high; young shoots glabrous. Leaves alternate, 1-foliolate; leaflets elliptic or ovate, cuneate or rounded at base, undulate or slightly crenulate at margin, tapering and emarginate at apex; petioles ca. 2 cm long, often broadly winged; wings spatulate to oblong-obovate, ca. 15 mm broad. Inflorescences axillary, few flowered. Flowers bisexual, white, fragrant. Sepals 4 or 5, deltoid, acute, ciliate at margin. Petals oblong, attenuate above, coriaceous, glandular. Stamens 22-27; filaments white; anthers oblong, 2.5-3 mm long, yellow. Ovary barrel shaped; style cylindrical, white; stigma capitate. Fruits subglobose or oblate, pitted, to 6×5 cm, orange to red; seeds

numerous, ovoid and smooth.

Flowering & fruiting: October – December

Native range: Southeast Asia especially, China, India and South Sea Islands.

Distribution: Widely cultivated throughout the tropics and sub-tropics

Occurrence in Maldives: Cultivated in homesteads

Uses: Fruits are edible and is used widely to make marmalade. They are also used for treating fungal skin infections, diabetes, indigestion, weight loss, nasal congestion, allergies, intestinal gas, chronic fatigue syndrome, liver and gallbladder problems. Bitter orange oil, obtained from the peel, is in demand for flavoring candy, ice cream, baked goods, gelatins and puddings, chewing gum, soft drinks, liquors and pharmaceutical products, especially if the water-or alcohol-insoluble terpenes and sesquiterpenes are removed.

Citrus limon (L.) Burm. f.



Synonyms: *Citrus medica* L. var. *limon* L.,
Citrus limonum Risso

Family: Rutaceae

Local names (Dhivehi): Dhoalhanbu,
Jambhoshi

English names: Lemon, Lime

Description: Small trees, armed with long spines. Leaves alterate, 4-6×2-3 cm, ovate-lanceolate, apex obtuse, coriaceous, dentate; petiole 1 cm. Flowers axillary, in clusters, cymes or solitary, white. Calyx cupular, 3-5-fid. Petals 4-8, 7×2.5 mm. Stamens 20 or more, filaments unequal, variously fused. Ovary many celled, 4-8 ovules in each cell, style 1 mm, stigma capitate. Fruits globose to oblong, 7.5×12.5 cm long, rind leathry, yellow when ripe, smooth to bumpy rinds dotted with oil glands, juice acrid.

Flowering & fruiting: February – May

Native range: Native to Southeast Asia

Distribution: Cultivated in tropical, semi-tropical and warm temperate countries including the Mediterranean region.

Occurrence in Maldives: Cultivated in homesteads

Uses: Fruits are edible. They are high in citric acid and Vitamin C and have antioxidant properties. Their tart flavour is popular in beverages, ice creams and desserts, salad dressings and meat and vegetable dishes. Apart from its culinary use, the fruit has a broad spectrum of medicinal properties. Lemon is used to treat scurvy, common cold and flu, H1N1 flu, ringing in the ears, Meniere's disease and kidney stones. It is also used to aid digestion, reduce pain and swelling and improve the function of blood vessels.

Citrus maxima (Burm.) Osbeck



Synonyms: *Aurantium maximum* Burm., *Citrus grandis* (L.) Osbeck

Family: Rutaceae

Local name (Dhivehi): Banbulhabos

English names: Babloos, Pomelo

Description: Trees to 8 m high, young parts grey-pubescent. Leaves unifoliolate, alternate, 6.5-10×3-7 cm, ovate or elliptic, base cuneate, subcordate or round, apex obtuse or acute, margin subentire or crenate, glandular-punctate; lateral nerves 7-10 pairs; petiole 20-30 mm long, winged. Flowers creamy, solitary or in axillary clusters. Calyx ca. 1 × 1.5 mm, irregularly lobed. Petals 5, ca. 25×13 mm, oblong-obovate. Stamens to 30; filaments irregularly polyadelphous at base, anthers oblong, apiculate. Fruit 15-20 cm across, oblate to pyriform, greenish or

yellow, glandular; pulp vesicles pale green to pinkish, acidic or sweet; seeds large, wrinkled.

Flowering & fruiting: April – November

Native range: Southeast Asia

Distribution: Widely cultivated in tropical and semi tropical countries

Occurrence in Maldives: Cultivated in homesteads

Uses: Fruits are rich in Vitamin C and eaten fresh. The juice is used in various beverages and the peel may be candied. The fruit is a remedy in coughs, fevers and gastrointestinal disorders. The wood, which is heavy and hard grained is used to make tool handles.

Citrus medica L.



Synonyms: *Aurantium medicum* (L.) M. Gomez, *Citrus fragrans* Salisb.

Family: Rutaceae

Local name (Dhivehi): Bodu lunboa

English names: Wild lemon, Citron

Description: Shrubs to small trees, glabrous; spines axillary, stout, sharp, ca. 3.5 cm long. Leaves alternate, simple, variable, 10-18×3-9 cm, obtuse at base, crenate at margin, acute at apex, glabrous; petioles 8-10 mm long, not winged or jointed above. Inflorescences axillary racemes, few-flowered. Flowers bisexual and male. Calyx urceolate, 4-lobed; lobes ca. 3.5 mm long. Petals 4, oblong, 2-4×0.5-1 cm, purplish. Stamens 35-40; filaments polyadelphous, short-pubescent, white; anthers linear, 4.5-5 mm long, yellowish. Ovary cylindric, ca. 8×4

mm, 12-loculed; style cylindric, 10-15 mm long, purplish; stigma globose, sticky. Fruits ovoid-oblong, 10-20×6-14 cm, yellowish; seeds numerous, ca. 10×5 mm, smooth.

Flowering & fruiting: March – October

Native range: Southeast Asia especially sub-himalayan region of North-Eastern India

Distribution: Introduced and cultivated widely in the tropics and subtropics

Occurrence in Maldives: Cultivated in homesteads

Uses: The fruit is edible and is used to make jam and pickles. The fruit is also used to combat seasickness, pulmonary troubles, intestinal ailments and scurvy. The essential oil obtained from the rind is regarded as an antibiotic. The fruit juice, which has a high content of Vitamin C, is used as an anthelmintic, appetizer, tonic, in cough, rheumatism, flatulence, vomiting and skin diseases.



Cleome viscosa L.



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Synonyms: *Cleome icosandra* L., *Polanisia icosandra* (L.) Wight & Arn.

Family: Capparaceae

Local names (Dhivehi): Raa-beburi, Raa-beberi

English names: Yellow mesambay, Wild mustard, Dog mustard

Description: Annual herbs, shoots with stalked glandular hairs. Leaves alternate, 3-7 foliolate; leaflets sessile, 0.6-3.5×0.3-2 cm, elliptic-oblong or obovate to spatulate, apex obtuse, base cuneate, margins ciliate, glandular pubescent; petiole to 5 cm long. Racemes terminal, lax, few-flowered, corymbiform. Flowers 1-1.5 cm across; pedicels to 1 cm long, elongate during fruiting. Sepals 4, 4-8×2-3 mm, lanceolate, apex acute, glandular hairy without. Petals 4, yellow, 6-12×3-5 mm, obovate to oblong-spathulate, apex rounded. Stamens 12-18; filaments 6-8 mm long, broadened at tip; anthers linear. Ovary sessile, 5-7 mm long,

oblong-cylindric, glandular-hairy; stigma capitate. Capsule 5-6.5×0.3-0.5 cm, linear-oblong, terete, striate, densely glandular hairy; seeds many, 1-1.5 mm across, reniform, transversely ridged, reddish-brown.

Flowering & fruiting: March – July

Native range: Not clearly known

Distribution: Southeast Asia, tropical Australia, tropical Africa, Central and South America.

Occurrence in Maldives: Common in open areas

Uses: The plant is used to treat various disorders such as diarrhea, fever, inflammation, liver diseases, bronchitis, skin diseases and malarial fever. The juice is a remedy for piles, lumbago, and earache. The leaves are diaphoretic, rubefacient and vesicant and are used as an external application to wounds and ulcers. Seeds are used in curries and are also added to tobacco to enhance narcotic quality.

Threat & damage: Cleome is a noxious weed in some countries. Its spread need be monitored and timely control measures adopted before its becomes a serious threat.



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Clerodendrum inerme (L.) Gaertn.



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Synonyms: *Clerodendrum javanicum* Spreng., *Volkameria inermis* L.

Family: Verbenaceae

Local name (Dhivehi): Dhungethi

English names: Garden quinine, Sorcerers bush, Wild jasmine, Seaside clerodendrum

Description: Scandent or trailing, evergreen, shrubs. Leaves opposite, elliptic-ovate, to 5×2.5 cm entire, petiolate and subcoriaceous. Flowers white, in axillary, trichotomous cymes, terminating the branches, ca. 2 cm across; bracts minute, linear. Calyx 5-6 mm long, cupular, minutely 5-toothed, persistent and slightly broader than the base of corolla-tube. Corolla lobes ovate, obscurely crenulate, obtuse. Stamen filaments pubescent, dark violet or purple, much exserted, curved above. Drupe pear-shaped, ca. 10 mm long, 4-lobed, glabrous, enclosed by the persistent green calyx.

Flowering & fruiting: November – December

Native range: India, Malaysia

Distribution: Tropical Asia to Western Polynesia, Australia and West Indies

Occurrence in Maldives: Very common along the beach in almost all the islands

Uses: Commonly used for hedges around gardens. Leaves are used to treat abscesses, tumours, leprosy, skin diseases, indolent ulcers, cough, bronchitis, inflammations, intermittent fevers, malarial fever and general debility.

Threat & damage: The plant has aggressive growth characteristics and can naturalize in coastal sites where it is often planted. It has the potential to form dense thickets smothering native plants. Mechanical control may be difficult since the plant can root at the nodes and produce large amount of biomass.



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Clitoria ternatea L.



Synonyms: *Clitoria albiflora* Mattei, *Clitoria bracteata* Poir.

Family: Fabaceae - Papilionoideae

Local name (Dhivehi): Nanreethimaa

English names: Butterfly flower, Bluebell flower

Description: Slender twiners. Leaves odd-pinnate; leaflets 5-7, 2.2-4.5×1.5-2.8 cm, broadly elliptic, ovate or obovate, base cuneate to rounded, apex obtuse to rounded, pubescent. Flowers solitary, axillary; pedicels to 1 cm long; bracts 2-3 mm long, persistent; bracteoles foliaceous, auricled. Calyx tube 5-7 mm long, pubescent; lobes acuminate. Petals blue or white, clawed; standard 3.5-4.3 cm long, obovate, emarginate; wings oblong, falcate, adnate to keel; keels obovate, incurved. Stamens diadelphous. Ovary ca. 7 mm long; style curved. Pods 5-9×0.6-0.9 cm, linear, compressed, apically beaked; seeds many, 5-7 mm long, compressed, reniform, black.

Flowering & fruiting: July- October

Native range: Tropical equatorial Asia

Distribution: Asia, Africa, Australia and America

Occurrence in Maldives: Grown as an ornamental plant

Uses: Its flowers contain the natural antioxidant blue proanthocyanidin. The dried plant is an anti-anxiety agent, antidepressant and anticonvulsant and the roots possess nootropic activity. The blue flowers are used for colouring food such as rice, tea, fruit juice or cocktails.



Coccoloba uvifera (L.) L.



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Synonyms: *Coccolobis uvifera* (L.) Crantz, *Polygonum uviferum* L.

Family: Polygonaceae

Local name (Dhivehi): Meybiskadhuru gas

English names: Tree grape, Sea grape, Bay grape

Description: Small trees, dioecious, bark smooth, greyish-yellow. Leaves simple, alternate, orbicular, to 25 cm across, thickly coriaceous, primary vein red, petiole small, base semi-circular. Inflorescence spike, terminal, cylindrical in shape. Flowers white, fragrant, small. Petals 5. Stamens 8. Fruit globose, purplish, to 2 cm in diam, in clusters, fleshy with a hard stone.

Flowering & fruiting: September - August

Native range: Florida, central and south America to Caribbean islands

Distribution: Widely planted in tropics

Occurrence in Maldives: Planted in office premises and in homesteads

Uses: The ripened fruits are edible and can also be made into jelly or wine. The wood

is used for turnery, inlay work, cabinetry and making charcoal. The plant possesses astringent, antidiarrheal and anti-dysentery properties. Bark and roots are rich in tannins. Plant decoction is used to treat hemorrhages and venereal disease and applied externally for skin diseases.



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Cocos nucifera L.



Synonym: *Cocos nucifera* var. *synphyllica* Becc.,
Cocos indica Royle

Family: Arecaceae/Palmae

Local name (Dhivehi): Dhivehi ruh

English name: Coconut

Description: Tree palm with annular petiolar scars. Leaves pinnatisect, 4-6 m long; leaflets reduplicate, 60-100×2.5-5 cm, base narrow, apex tapering, acute. Spadices inter foliar, 50-100 cm long, paniced; branches to 60 cm long. Spathe 60-130 cm long, oblong, woody. Flowers monoecious, subsessile. Male flowers: often paired, to 8 mm long. Sepals ca. 3 mm long, ovate. Petals 6-8 mm long, ovate, woody, yellowish-brown. Stamens 6; pistillode short, 3-fid. Female flowers 1-3 per branch, basal, globose. Perianth-lobes 6; woody; outer lobes broadly obovate, ca. 2 cm across; inner lobes reniform, to 2 cm across. Ovary 3-celled; ovule 1 per cell; style short. Drupe to 30 cm long, ovoid or globose, trigonous; pericarp fibrous; endocarp stony. Seed coherent with the endocarp.

Flowering & fruiting: Throughout the year

Native region: Probably Southeast Asia

Distribution: Cultivated throughout the tropics

Occurrence in Maldives: Very common in natural habitats as well as homesteads

Uses: A multipurpose palm which provides food, water, oil, medicine, fibre, timber and fuel. Coconut and its oil has broad spectrum usage in medicine and in culinary. Clumps of unopened flowers yield an alcoholic beverage (toddy), when tapped. The roots are considered antipyretic and diuretic. Milk of young coconut is a diuretic, laxative, and anti diarrheal. The palms are often planted as ornamentals and windbreaks in resorts, beaches, gardens and coastal parks.



Coix lacryma-jobi L.



Synonyms: *Coix agrestis* Lour., *Coix palustris* Koord.

Family: Poaceae / Gramineae

Local name (Dhivehi): Jangali zuvaari

English name: Job's tears

Description: Robust annual herbs. Culms tufted. Leaves 10-45×1-2.5 cm, linear-oblong, cordate at base, acuminate at apex; sheaths to 6 cm long; ligules ovate, membranous. Inflorescence terminal and axillary peduncled, false spikes, 3-8 cm long, consisting of one female spikelet completely enclosed in a globose or ovoid basal cupule like bract. Male spikelets 2 or 3, exerted from the mouth of cupule, 5-12×2-4 mm, elliptic or elliptic-lanceolate. Lower glume 4-8×2-4 mm, ovate-elliptic, 2-keeled. Upper glume 3-7×2-3 mm. Lower floret male. Upper floret male or barren. Stamens 3; anthers 3-5 mm long. Female spikelets 4-14 mm long, globose or ovoid, bony, shining white or grey. Lower glume ovate-oblong, acute. Upper glume ovate. Lower

floret female or barren. Upper floret female. Caryopsis 5-7 mm, subglobose, furrowed in the middle.

Flowering & fruiting: July- March

Native range: Tropical Asia

Distribution: Pantropical

Occurrence in Maldives: Occasional along the sides of marshy areas

Uses: An ornamental plant cultivated for its grains which is a source of food. The seeds and roots are used to cure arthritis, high cholesterol, warts, hay fever and pain in the joints.



Colocasia esculenta (L.) Schott



Synonyms: *Arum esculentum* L., *Arum colocasia* L.

Family: Araceae

Local name (Dhivehi): Furedhdhe ala

English names: Taro, Dasheen

Description: Rhizomatous herbs, rhizome stoloniferous. Leaves few to many, peltate, 20-28×10-18 cm, ovate, cordate to sagittate at base, glabrous; nerves 6 pairs; petiole 30-45 cm long, cylindrical, smooth. Peduncle solitary or few together, 10-20 cm long, stout; spathe to 20 cm long, yellow, lanceolate, constricted above the base; limb acuminate. Spadix 10 cm long, cylindrical, appendages terete, obtuse. Male flowers above, to 5-6 cm of the spadix, stamens 6; female flowers on lower 2 cm of the spadix; ovary 1-celled, ovules many on 2-4 parietal placentas. Neutral flowers many, peltate, between the female and male flowers. Fruit an aggregate of berries, globose.

Flowering & fruiting: May – October

Native range: Southern India and Southeast Asia

Distribution: Pantropical

Occurrence in Maldives: Very common in marshy areas. Also cultivated in homesteads.

Uses: Tuber is used for making a variety of food products. The herb is utilized in the treatment of various ailments such as asthma, arthritis, diarrhea, internal hemorrhage, neurological disorders and skin problems.



Colubrina asiatica (L.) Brongn.



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Synonym: *Ceanothus asiaticus* L.

Family: Rhamnaceae

Local names (Dhivehi): Raarohi, Raaruhi

English name: Asiatic snake wood

Description: Shrubs; branches zigzag. Leaves alternate, 3-8×2-4 cm, ovate, broadly rounded or shallowly cordate at base, crenate at margin, acuminate at apex, chartaceous; stipules ca. 1 mm long. Flowers in cymes, greenish yellow, fragrant, lower ones bisexual, the upper sterile or staminate; peduncles 2-5 mm long; pedicels 2-5 mm long. Calyx lobes 2-3 mm long, glabrous. Petals emarginate, 1.5-2 mm long, yellow; claw slender. Stamens 1-1.5 mm long, anthers dorsifixed. Capsules globose, depressed at top, 8-10 mm; seeds 3, slightly emarginate at base, 4-5 mm, chocolate-brown.

Flowering & fruiting: December – March

Native range: Tropical and subtropical regions of the Old World, from Eastern Africa to India, Southeast Asia, tropical Australia and the Pacific Islands

Distribution: Asia-Pacific region, Kenya, Cayman Islands, Bahamas, Mexico

Occurrence in Maldives: Fairly common in most islands

Uses: The leaves are alterative and cooling and a decoction made from them is used to alleviate skin irritation and to treat a variety of skin diseases. These are also useful as a soap substitute since they contain saponins and produce lather when rubbed in water. A decoction of the fruit is used as an abortifacient and tonic. The fruits also contain saponins and are sometimes used as a fish poison.

Threat: *Colubrina* is reported as an invasive plant in Florida, United States.



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Corchorus aestuans L.



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Synonyms: *Corchorus acutangulus* Lam.,
Corchorus aesticans Hill

Family: Tiliaceae

Local name (Dhivehi): Kudakudhinge

English names: Wild jute, West African mallow, East-Indian mallow

Description: Spreading annual herbs; stems pilose, often reddish. Leaves 2.5-7×1.5-3.5 cm, ovate to elliptic-lanceolate, base rounded, margins serrate, the basal pair of serrations ending in setae or not, apex acute, basally 3-5-nerved; petioles to 3 cm long; stipules 4-8 mm long, setaceous. Flowers 2-3 in leaf-opposed, shortly pedunculate cymes; pedicels ca. 2 mm long. Sepals 5, 3-4 mm long, linear-oblong, hooded and apiculate. Petals 5, yellow, 3-5 mm long, obovate, obtuse. Stamens many. Ovary ca. 2 mm long, cylindrical, 3-loculed; style 3-fid; stigma 2-lobed. Capsules 1-3×0.4-0.6 cm, 6-angled, 3 of the angles winged, 3-loculed; seeds numerous, dark brown.

Flowering & fruiting: August - February

Native region: Probably Pantropical

Distribution: Widely cultivated in Africa and Asia

Occurrence in Maldives: Common in open areas

Uses: The stem yields a bast fibre, which can be made into thread and string, but the product is coarser and less durable than that made from *Corchorus capsularis* L. (white jute). The leaves are widely eaten as a vegetable. In north-eastern India, the root is cooked as a vegetable. The foliage is browsed by all livestock. In traditional African medicine, an extract of the roots or leaves is used for the treatment of gonorrhoea, and an extract of the whole plant, including the roots, is used for making injections for the treatment of urethral discharges. In India, the seeds are used for the treatment of stomach-ache and pneumonia.



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Cordia subcordata Lam.



Synonyms: *Cordia banalo* Blanco, *Cordia campanulata* Roxb.

Family: Boraginaceae

Local names (Dhivehi): Kaani, Kauni

English names: Cordia, Kanawa trees, Kou

Description: Small trees. Leaves simple, 5-15×3-10 cm, base rounded or subcordate; petiole 6-12.5 cm. Corymbs lateral, few-flowered; flowers 6-merous. Calyx to 2 cm; teeth short, triangular, villous within. Corolla-tube 2 cm, lobes 1-2 cm. Branches of the stigmas linear-spathulate. Fruit 2.5 cm, ellipsoid, acute, usually 1-seeded; seed muricated, subspinose.

Flowering & fruiting: Throughout the year

Native range: Eastern Africa, Southeast Asia and Northern Australia

Distribution: Pantropical

Occurrence in Maldives: A common tree in natural habitats

Uses: The wood is soft, durable, easily worked and resistant to termites. The seeds are edible. The bark is used to treat persistent diarrhea.



Crinum asiaticum L.



Synonym: *Crinum toxicarium* Roxb.

Family: Amaryllidaceae

Local name (Dhivehi): Maakandholhu

English name: Poison bulb

Description: Bulbous herbs; bulb globose, 12×10 cm, neck 10-20 cm. Leaves clustered from the apex of bulbs, oblong, 70-100×1.5-8.5 cm, flat, coriaceous, glabrous, narrow at base, margin entire, apex gradually tapering. Scape to 30 cm long, often more, 1-2 cm across; umbels 10-17 cm, 20 – 50 flowered; bracts hooded, ovate-lanceolate, 7-8.5×4.5-5 cm; bracteoles to 5 cm. Flowers to 16 cm long, 10 -14 cm across. Perianth salver-shaped; tube to 10 cm; lobes white, oblong-

linear, to 7×1.2 cm, glabrous, 18-20 nerved, subacute, cuspidate. Filaments to 4.5 cm; anthers 2×0.2 cm. Ovary 3-celled; ovule 1 or 2; style to 15 cm.

Flowering & fruiting: Throughout the year
Native range: Tropical and sub-tropical Asia

Distribution: The tropics and subtropics

Occurrence in Maldives: Occasional in natural habitats and in homesteads

Uses: Leaves and roots are diaphoretic, emetic and purgative. The plant is useful to treat inflamed joints and sprains. The bulb is used as rubefacient in rheumatism. Bruised leaves are used as an insect repellent.

Crotalaria juncea L.



Synonyms: *Crotalaria benghalensis* Lam.,
Crotalaria fenestrata Sims

Family: Fabaceae - Papilionoideae

Local name (Dhivehi): Vihagiguni

English names: Brown hemp, Indian hemp,
Sun hemp

Description: Annual erect herbs; stems striate, silky-pubescent. Leaves 3-8×0.5-1.5 cm, oblong-elliptic to oblanceolate, base acute, apex obtuse to subacute, clothed with appressed hairs; petiole to 3 mm long. Inflorescence terminal, racemose, many-flowered, 15-30 cm long. Flowers yellow,

1.5-2 cm long; pedicels ca. 5 mm long. Calyx ca. 1.8 cm long, fulvous hairy, teeth linear-lanceolate. Standard petal 1.5-2 cm long; ca. 2 cm long and broad, ovate, veined red, silky without; wings shorter than keel and standard. Pods sessile, 2.5-3×1-1.3 cm, oblong-cylindrical, fulvous silky hairy; seeds 8-15, ca. 4 mm long, obliquely-cordiform.

Flowering & fruiting: July – September

Native range: Bangladesh, Bhutan and India

Distribution: The tropics, subtropics and cool temperate steppe

Occurrence in Maldives: Common in open areas

Uses: The plant is used as a fibre crop, green manure and cover crop. Leaves and seeds are used for anorexia, constipation, blood disorders, amenorrhoea, skin diseases and obesity. In siddha medicine, roots, leaves and seeds are used to treat fever, poisoning and dysentery.



Crotalaria pallida Aiton



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Synonyms: *Crotalaria bookeri* Arn., *Crotalaria javanica* Jungh.

Family: Fabaceae - Papillioideae

Local name (Dhivehi): Vihagiguni

English names: Ding ding, Smooth rattlebox, Streaked rattlepod

Description: Erect sub-shrubs. Leaves 3-foliolate; leaflets subequal, 3-7×1.8-4 cm, obovate or elliptic-ovate, apex obtuse or acute, base cuneate, glaucous below; petiole 3-7 cm long. Flowers ca. 1.3 cm long, in terminal many-flowered racemes, to 25 cm long. Calyx 5-7 mm long, upper 2-lobes united. Petals yellow with prominent reddish veins; standard ca. 1.2 cm long, broadly elliptic; keels curved and beaked. Stamens 10, monadelphous. Style abruptly incurved at the base. Pods 3-4.2×0.6-0.8 cm, oblong-cylindrical; seeds 18-30, brown.

Flowering & fruiting: September - January

Native range: Paleotropics

Distribution: Pantropical

Occurrence in Maldives: Fairly common in open areas

Uses: The flowers are used as vegetable. The plant is used in traditional medicine to treat urinary problems.



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Cyanthillium cinereum (L.) H. Rob.



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smooth or puberulus. Leaves variable, 2-8×1-3 cm, ovate, acute at both ends, thinly hairy below; petiole 1-2 cm long, slender. Heads 5×3 mm, in terminal corymbose cymes, peduncled; outer bracts minute, inner oblong, acute, cuspidate, hairy. Flowers 5-10, similar; corolla 3 mm long, glabrous, bluish-purple. Achenes 1.5 mm long, hairy; outer pappus 1 mm long, setaceous, inner 3 mm long.

Flowering & fruiting: Throughout the year
Native range: Africa, tropical and temperate Asia and Australia

Distribution: Pantropics

Occurrence in Maldives: Common in open areas

Uses: The plant is used to treat intermittent fever, filariasis, blisters, boils, vaginal discharges, cough, malaria, arthritis and leprosy. A poultice from leaves reduces headaches and a root decoction relieves stomach aches and diarrhea.

Threat & damage: A fast-growing invasive herb with the capacity to negatively impact various ecosystems. It is listed as a weed in over 27 different crops in 47 countries in Asia, Australia, Africa and America.



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Synonyms: *Conyza cinerea* L., *Vernonia cinerea* (L.) Less.

Family: Asteraceae / Compositae

Local names (Dhivehi): Fenkumburuvaani, Kambulic,

English names: Ash coloured fleabane, Purple fleabane, Little ironweed

Description: Annual herbs, stem ribbed,

Cyclosorus interruptus (Willd.) H. Ito



Synonyms: *Pteris interrupta* Willd.; *Aspidium gongylodes* Schkuhr

Family: Thelypteridaceae

Local name (Dhivehi): Kulhlhahavaali

English names: Hottentot fern, Willdenow's fern

Description: Stiff erect herbs, rhizomes long, creeping, black, scales ovate-lanceolate. Fronds distant; laminae 20-50×10-20 cm, apices caudate with apical pinna similar to lateral ones; lateral pinnae 10-25 pairs, linear-lanceolate, 5-10×1 cm; segments 20-30 pairs on middle pinnae, triangular, 3-5×2-4 mm. Sori orbicular, medial to submarginal, proximal 1 or 2 pairs of veins sterile; indusia sparsely hairy. Sporangia bear reddish orange and spherical glands on stalks.

Reproductive structures: Sporophylls produced throughout the year

Native range: The tropics and subtropics

Distribution: Widespread in the tropics and subtropics

Occurrence in Maldives: Very common in marshy areas

Uses: The plant is a good choice for landscaping. Both fresh and dry fronds are used for making garlands.



Cymbopogon citratus (DC.) Stapf



Synonyms: *Andropogon ceriferus* Hack., *Andropogon citratus* DC.

Family: Poaceae/Gramineae

Local name (Dhivehi): Kaasinjee

English names: Oil grass, Lemon grass, West Indian lemon grass

Description: Perennial grass with dense fascicles of leaves arising from a short, oblique annulate rhizome. Leaves aromatic; blades linear, long-attenuated towards the base and tapering upwards to a long point, to 90×1.6-1.8 cm, very firm, glaucous green; midrib whitish on upper side, primary lateral nerves 4-6 on each side, raised above; sheaths 10-30 cm long, cinnamon coloured or russet on the inside, those of the culms shorter than internodes, finely pubescent or velvety at the nodes. Flowers reddish, borne

in loose panicles 30-60 cm long, sometimes larger, internodes ca. 5-20 cm, decreasing in length from base to apex.

Flowering & fruiting: July- September

Native range: Southern part of India, Sri Lanka

Distribution: Asia, Africa, South America, Caribbean Islands, Europe and Oceania

Occurrence in Maldives: Cultivated in agricultural farms

Uses: It is grown for its essential oil and to flavour a variety of food and beverages. Lemongrass oil is a stimulant, antiseptic, febrifuge, carminative, anti-inflammatory, diuretic and anti-diabetic. It also has allelopathic, anthelmintic, anticancerous, antibacterial, antifungal, anti-inflammatory and antimalarial properties.

Cyperus dubius Rottb.



Synonyms: *Cyperus coloratus* Vahl, *Scirpus glomeratus* L.

Family: Cyperaceae

Local name (Dhivehi): Hui

English name: Kulhandhuru

Description: Erect, tufted perennials with short rhizome; culms 15-38 cm tall, triquetrous, base bulbous, covered with brown membranous sheaths. Leaves many, basal, 16-30×0.2 - 0.4 cm, linear, gradually acuminate at apex, scabrid on margins towards the apex; sheaths 2-6 cm long, basal ones brown. Inflorescence simple, congested in a dense, hemispherical, ovoid, white, head, 1-2 cm long and wide; leafy bracts 3-5, the longest upto 20 cm long. Spikelets 5-8×1.5-2.5 mm, ovate-acute, turgid-flattened. Glumes 4-9, distichous, 2.5-3.5×2-3 mm, broadly ovate, apex subacute, whitish. Stamens 3, oblong. Stigma 3. Nuts 1.5-2×0.5 mm, oblong-ellipsoid, trigonous, light brownish.

Flowering & fruiting: August – December

Native range: Tropical Africa, India, Indo-China to Malaysia

Distribution: Old World tropics

Occurrence in Maldives: Occasional along the sides of marshy areas

Uses: Used as a cattle fodder



Cyperus javanicus Houtt.



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Synonyms: *Cyperus canescens* Vahl, *Cyperus anomalus* Steud.

Family: Cyperaceae

Local name (Dhivehi): Hai

English names: Sharp Cyperus, Java sedge

Description: Erect, tufted perennials with short rhizome; culms 40-85 cm tall, obtusely trigonous, glaucous-green. Leaves many, 45-100×0.5-1.3 cm, linear, gradually acuminate, scabrid on margins and midrib, coriaceous; sheaths, basal ones dark brown. Inflorescence large, compound, 7-15×8-20 cm; primary rays 6-12; leafy bracts 5-7, the lower ones much exceeding the corymb, the longest upto 70 cm long. Spikelets densely spicate, straw-coloured. Glumes distichous, broadly ovate, apex acute, subcoriaceous, keel greenish, pale brown, basal 2 glumes empty. Stamens 3. Stigmas 3. Nut 1-1.5×0.5-1 mm,

obovate, trigonous, black-brown.

Flowering & fruiting: Throughout the year

Native range: Tropical Pacific, Africa, Asia and Hawaii (USA)

Distribution: Pantropical

Occurrence in Maldives: Occasional in open areas and along the sides of marshy areas.

Uses: No known uses



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Cyperus malaccensis Lam.



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Synonyms: *Cyperus fortunei* Steud., *Cyperus incurvatus* Roxb.

Family: Cyperaceae

Local name (Dhivehi): Bahui

English name: Chinese mat grass

Description: Perennials; rhizome with short stolons. Stem sharply trigonous. Leaves reduced; sheaths few, up to 30 cm, grey-brown or reddish, lowest bladeless; blades 1-3, short, smooth or scabrous. Inflorescence simple anthelodium, up to 10 cm diam., usually wider than long; bracts 3-4, longer than inflorescence; primary branches up to 7 cm; more than 15 spikes in almost spherical group. Spikes with 10-40 glumes, glume-like prophyll bi-nerved; rachis almost straight, quadrangular with sharp, narrowly winged angles; glumes cymbiform when fresh, reddish-brown. Nut ca. 1.8×0.5 mm, trigonous, slightly compressed, dark brown, glossy, very finely reticulate.

Flowering & fruiting: September - December

Native range: Southeast Asia and Australia.

Distribution: Pantropics

Occurrence in Maldives: Occasional along the sides of marshes and seacoast

Uses: Culms used to make baskets, mats, hats and slippers. Tubers are used in dyspepsia, hyperdipsia, burning sensation, hepatopathy, cephalalgia and general debility. The rhizomes are diuretic, also used for post-partum treatment and against oedemas.



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Dactyloctenium aegyptium (L.) Willd.



Synonyms: *Cynosurus aegyptius* L., *Aegilops saccharina* Walter

Family: Poaceae / Gramineae

Local name (Dhivehi): Maahui

English names: Egyptian finger grass, Egyptian crabgrass,

Description: Annuals. Culms 30-60 cm long, creeping or geniculately ascending, rooting at the nodes. Leaves 5-20×0.3-0.6 cm, linear, rounded or shallowly cordate at base, acuminate, margins at base ciliate; sheaths to 5 cm long, keeled; ligules ovate, fimbriate, membranous. Spikes 2-6, digitate, each 2-5 cm long, oblong. Spikelets sessile, 2-3.5 mm long, ovate or oblong, 3-4-flowered, laterally compressed, densely imbricate, in 2 rows. Lower glume 1.5-2×1-1.5 mm. Upper glume 1.5-2×1-1.5 mm. Lemmas 1.5-3×1-1.5 mm, ovate, aristate; arista ca. 1 mm long. Palea 1-1.5×1 mm, ovate-lanceolate, acuminate. Stamens 3. Grain ca. 1 mm long, obovate or triangular, transversely rugose.

Flowering & fruiting: Throughout the year

Native range: Africa

Distribution: Central and South America, Africa, Asia and Australia

Occurrence in Maldives: Common in open areas

Uses: A fodder grass. Seeds can be used as poultry feed and to make alcoholic beverages. The whole plant is a remedy for worm infestation and wounds. A decoction of the seeds is known to relieve pain in the region of kidney.

Threat: The plant is reported to be invasive in certain countries where it was introduced.



Delonix regia (Hook.) Raf.



Synonym: *Poinciana regia* Hook.

Family: Fabaceae - Caesalpinioideae

Local name (Dhivehi): Ginimaa

English names: Flamboyant tree, Flame tree, Royal Poinciana, Gulmohar, Peacock flower

Description: Trees, to 20 m high; branchlets warty, puberulous. Leaves bi-pinnate, alternate; rachis 15-20 cm long; pinnae 8-20 pairs, opposite or subopposite, 2.7-10 cm, with sessile glands between each pinnae on upper side; leaflets 18-50, 0.4-0.8×0.2-0.35 mm, oblong or linear-oblong, base oblique, apex obtuse. Flowers crimson, in terminal or lateral corymbose panicles. Calyx lobes 5, thick, valvate, subequal. Petals 5, orbicular, imbricate; margins fimbriate; claws yellow, upper petal dissimilar and white streaked with red and yellow. Stamens 10, free. Fruit a pod, 40×6 cm, flat, elongate, woody; seeds many, oblong.

Flowering & fruiting: February – July

Native range: Madagascar

Distribution: Throughout the tropics

Occurrence in Maldives: Grown as an avenue tree

Uses: The wood is soft and employed for making agricultural implements. The seeds are used in tanning industry. Seed oil possesses insecticidal and anti-bacterial properties. The oil cake is a good fertiliser. The seed is a carminative and is also used in cases of inflammation, ear ache and chest complaints.

Threat & damage: The tree has become naturalized in many countries. It is known to be invasive in Australia, Christmas Island and in a number of Pacific islands. The tree can form monocultures and prevent regeneration of native species.



Dendrolobium umbellatum (L.) Benth.



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Synonyms: *Desmodium umbellatum* (L.) DC.,
Hedysarum umbellatum L.

Family: Fabaceae - Papilionoideae

Local names (Dhivehi): Haalhala, haulhala

English names: Horse bush, Sea vetch tree

Description: Shrubs or small trees, branchlets densely downy. Leaves trifoliolate; petioles to 3 cm., slightly furrowed; leaflets subcoriaceous, rhomboidal to ovate-elliptic, green and glabrous above, thinly grey-canescenscent or nearly glabrescent beneath, larger one at tips, roundish or broad-oblong, 5-8 cm long. Umbels 6-12-flowered; pedicels short, unequal. Calyx 5 mm. densely silky; teeth shorter than or as long as the tube. Corolla 3-15 mm. Pod 3-5 cm long; joints 4-5, thick, glabrescent or silky, indented at both sutures.

Flowering & fruiting: June – February

Native range: Tropical Africa and Asia, Australia and Pacific Islands

Distribution: Throughout the tropics

Occurrence in Maldives: Fairly common in most of the islands

Uses: The plant is a fodder and the timber is used in construction. The crushed leaves and shoots are used to treat enlarged spleen. A decoction of the leaves is drunk as a general tonic and the flowers are used to treat gonorrhoea and irregular menstruation.



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Derris trifoliata Lour.



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Synonyms: *Dalbergia heterophylla* Willd., *Derris affinis* Benth., *Meibomia heterophylla* (Willd.) Kuntze

Family: Fabaceae - Papilionoideae

Local name (Dhivehi): Thelaviyo

English name: Common derris

Description: Woody climbers, stem sparsely lenticellate. Leaves pinnate, alternate, to 15 cm; leaflets 3-5, oblong-lanceolate, 4.5-9 × 2-4 cm, base obtuse, margin entire, apex acuminate; petiole to 10 cm. Racemes to 12 cm; pedicel to 4 mm. Flowers to 1 cm across. Calyx-tube 4 mm. Petals rose; standard orbicular, 1.2 × 0.9 cm; wings 1.2 × 0.2 cm; keels 1 × 0.4 cm. Staminal sheath 8 mm. Ovary 4 mm. Pod ovoid or orbicular, base and apex obtuse, glabrous, winged; seeds 1 or 2.

Flowering & fruiting: January - October

Native range: Australia, Madagascar and Papua New Guinea

Distribution: Pantropical

Occurrence in Maldives: Fairly common in some northern islands in the mangrove habitats

Uses: Leaves are used to kill a wide range of creatures including insects, earthworms and fish. The plant is used in local medicine as a stimulant and antispasmodic and prescribed for rheumatism, chronic paralysis and dysmenorrhea.



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Desmodium heterophyllum (Willd.) DC.



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Synonyms: *Hedysarum heterophyllum* Willd.,
Meibomia heterophyllum (Willd.) Kuntze

Family: Fabaceae - Papilionoideae

Local name (Dhivehi): Binhama

English names: Desmodium, Spanish clover

Description: Prostrate herbs; branches loosely villous, slender. Leaves 3-foliolate; leaflets 1-2.2×0.5-1 cm, ovate-elliptic or obovate, base obtuse, apex rounded, hairy when young, glabrescent on ageing; petiole to 2 cm long; stipules 2-5 mm long, ovate-lanceolate, striate, ciliate on margins. Flowers in axillary, 1-4-flowered racemes; pedicels 6-12 mm long. Calyx tube broad; lobes 2-2.5 mm long. Corolla pink, 3-4 mm long. Ovary 1.5-2 mm long, hairy. Pods 1.5-2×0.4-0.5 cm, 4-5-jointed, compressed, dorsal suture continuous, ventral constricted.

Flowering & fruiting: July- December

Native range: South and Southeast Asia

Distribution: The Asia-Pacific and parts of Africa and South America

Occurrence in Maldives: Common in open moist areas

Uses: Valued as a ground cover and fodder. Twigs and leaves are used to treat diarrhea, dysentery and problems of digestion. Root, stem and leaves are also used to get relief from scabies and itches. Leaves are used as a glactagogue.



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Dichrostachys cinerea (L.) Wight & Arn.



Synonyms: *Mimosa cinerea* L., *Acacia cinerea* (L.) Spreng.

Family: Fabaceae-Mimosoideae

Local name (Dhivehi): Kudhu beli

English names: Marabou-thorn, Princess's earrings, Sickle bush

Description: Small trees, armed with spines; spines axillary, straight, often leaf bearing; bark with vertical fissures, peeling off in thin flake; branchlets densely pubescent, spine-tipped. Leaves bipinnate, alternate, stipulate; rachis 30-65 mm, slender, pulvinate, pubescent; pinnae 5-15 pairs, 1.5-2 cm, opposite, even pinnate, slender, pulvinate, pubescent, with a gland between each pairs; leaflets 24-50, opposite, sessile, estipellate; 0.2-0.3×0.1 cm, oblong, base obtuse, apex acute. Flowers polygamous, 2 mm across, in solitary or axillary paired spikes; upper flowers bisexual, yellow; lower ones neutar, pink or purple; bracts oblong. Calyx tube campanulate, lobes 5. Petals 5, lanceolate, connate below. Stamens 10, free, exserted, anthers ending in stalked glands. Ovary 0.5 mm. Fruit a pod, linear, flat, coiled,

continuous within, indehiscent or opening from apex; seeds 4-6, ovoid, compressed.

Flowering & fruiting: October-January

Native range: Africa

Distribution: Pantropical

Occurrence in Maldives: A recent introduction to some of the Islands

Uses: An ornamental plant with attractive pink and yellow flowers. The wood is used as round wood, posts, exterior fittings, fences, walking sticks, tool handles and spears. Non-wood uses are for getting gums, lac, dyestuffs, bark products, fibres, and honey. Debarked roots are used to make baskets and racks. Leaves and seeds are nutritious and used as a fodder for livestock. In traditional medicine, the bark, roots and leaves are used to treat headache, toothache, dysentery, elephantiasis, stings, snakebites, syphilis and gonorrhoea.

Threat & damage: It is a fast growing species which can invade agricultural fields, wasteland, roadsides and disturbed areas. It poses a threat to agricultural production wherever invaded.

Dioscorea alata L.



Synonym: *Dioscorea globosa* Roxb.

Family: Dioscoreaceae

Local name (Dhivehi): Bileiy kattala

English names: Asiatic yam, Greater yam, White yam

Description: Twiners, root tuberous, tubers one to several, polymorphic, variously branched or lobed. Stem twining to right, 4-5-winged; wings sometimes reduced to ribs. Bulbils globose, ovoid or obpyriform, occasionally with rootlets. Leaves opposite or rarely subopposite, 7-18×4-10 cm, broadly ovate or deltoid-ovate, base cordate or subsagittate, apex acuminate, primary veins 7; petiole to 8 cm long, winged. Male spike on axillary branchlets, paniculate; rachis winged. Flowers ca. 1.5 mm long; bracts to 1 mm long, deltoid-ovate; tepals 1-1.5 mm long, widely ovate, obtuse; stamens 6, free; pistillode conical. Female spike solitary,

axillary. Flowers laxly arranged, sessile; bracts 1-1.5 mm long, ovate; tepals fleshy, ca. 1 mm long, broadly ovate; staminodes 6, very small; ovary ca. 3 mm long. Capsule 2-2.5 mm long, broadly obcordate.

Flowering & fruiting: Throughout the year

Native range: Southeast Asia

Distribution: Pantropical

Occurrence in Maldives: Cultivated in homesteads

Uses: Apart from its food value, the tubers are used as a remedy for haemorrhoids, diabetes, leprosy, gonorrhoea, strangury and helminthiasis.

Threat: The plant is a vigorous twining vine reported to be invasive in Florida in the USA and Cuba, Costa Rica and several Islands in the Pacific. It has the potential to displace native species and alter ecological functions.

Dioscorea bulbifera L.



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Synonyms: *Helmia bulbifera* (L.) Kunth.,
Dioscorea crispata Roxb.

Family: Dioscoreaceae

Local name (Dhivehi): Assidhakattala

English names: Air potato, Bulb bearing yam, Potato yam

Description: Twiners with tuberous root stocks; stem terete, twining to left. Leaves 9-25 × 8-23 cm, ovate-suborbicular, base deeply cordate, apex acuminate to shortly caudate, membranous, glabrous, basally 9-11-ribbed; petiole to 20 cm long. Bulbils frequent in leaf axils and in inflorescence. Male flowers in slender, axillary paniced spikes, pendulous, to 18 cm long; bracteoles ovate, acute. Tepals light green; lobes 6, biseriate, linear-oblong. Stamens 6, free. Female spikes 1-3 together; staminodes 3; ovary triquetrous, 3-locular, ovules 2-per locule; styles 3; stigma 2-fid, reflexed. Capsules 1.5-2.3×1-1.5 cm, oblong, 3-winged.

Flowering & fruiting: September - October
Native range: Africa, Southern Asia and Northern Australia

Distribution: Widely cultivated in the tropics and subtropics

Occurrence in Maldives: Occasional in natural habitats

Uses: The plant is high in diosgenin, a steroid sapogenin, which is used in the production of a number of synthetic steroidal hormones, such as those used in the manufacture of birth-control pills. It is also used in traditional medicine as a remedy for piles, diarrhea, dysentery, conjunctivitis, fatigue and depression.

Threat & damage: As an invasive plant, *D. bulbifera* can smother and displace native species. It can interrupt functioning of natural ecosystems by forming a mat of vines and shading out trees and shrubs in the understory.

Dodonaea viscosa (L.) Jacq.



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Synonyms: *Ptelea viscosa* L., *Dodonaea arborea* Herter

Family: Sapindaceae

Local name (Dhivehi): Kudhi-ruuvaali

English names: Hopseed bush, Switch sorrel, Sand olive

Description: Shrubs to small trees; branches terete, often angled; young parts scurfy puberulous. Leaves alternate, 1-8×0.2-1.5 cm, oblanceolate-obovate or broadly elliptic, subacute or shortly apiculate or sometimes notched, abruptly tapering towards the basal end, viscid, with shining yellowish resinous exudation. Inflorescence paniced cymes, up to 7 cm long, lateral nerves up to 35, looping. Flowers greenish yellow. Sepals oblong. Anthers oblong-linear. Capsules membranous, compressed, up to 1.5 cm long, notched at apex and base, 2-3-winged, 1-2-seeded; seeds black.

Flowering & fruiting: January – May

Native range: Australia, India and tropical and subtropical Africa

Distribution: Pantropical

Occurrence in Maldives: Occasional in some islands

Uses: The wood is hard and durable. The powdered leaves are used to promote healing of wounds, swellings and burns. The plant is used to treat dysentery, digestive disorders and rheumatism and also to stimulate lactation in feeding mothers.



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Eclipta prostrata (L.) L.



Synonyms: *Verbesina prostrata* L., *Eclipta alba* (L.) Hassk.

Family: Asteraceae / Compositae

Local name (Dhivehi): Kalhu kandhili

English names: False daisy, Trailing eclipta

Description: Erect herbs; stems appressed, strigose. Leaves simple, opposite, 1-3×0.2-0.5 cm, oblong or oblong-elliptic, apex acute or subacuminate, base cuneate, entire, densely strigose, sessile or subsessile. Heads 4-5 mm across; peduncles appressed strigose. Involucral bracts in 2 rows. Ray florets 2-3- seriate, female, ca. 4 mm long. Ligules minute, ovate, acute, membranous. Corolla ca. 2.5 mm long with 2 unequal, obtuse-tipped lobes at apex. Disk florets numerous, ca. 3 mm long. Corolla campanulate, ca. 1.6 mm long; lobes 4, ovate, ciliate on margin. Stamens 4 or 5, sagittate. Ovary 1.1-1.2 mm long. Achenes yellowish brown to brown, oblong-turbinate, dorsiventrally compressed and sharply angled; pappus of partially or completely united scales forming a cone at the apex.

Flowering & fruiting: Throughout the year

Native range: Asia

Distribution: Widely cultivated in the tropical, sub-tropical and warm temperate regions

Occurrence in Maldives: Common in open areas and along the sides of marshy habitats

Uses: The plant is a well-known hair tonic. Roots and leaves are used to treat diseases of liver and gall-bladder. The plant is useful for expelling intestinal worms, curing cough, asthma, night blindness, eye diseases and head-ache.



Eichhornia crassipes (Mart.) Solms



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Synonyms: *Pontederia crassipes* Mart.,
Eichhornia speciosa Kunth

Family: Pontederiaceae

Local name (Dhivehi): Fen Oakidu

English name: Water hyacinth

Description: Aquatic herbs with short stem and many long fibrous roots. Leaves 4.5-11×5-10 cm; broadly ovate to rhomboid, entire, obtuse, base cuneate or rounded. Petiole glabrous, spongy, 6-30 cm long, with a fusiform bulbous portion about the middle. Peduncle spongy. Inflorescence 6-15 flowered. Flowers lilac, tinged blue, withering soon. Perianth to 5.5 cm long, tube green, glandular; segments 3-4 cm long, obovate to ovate-oblong, posterior segment with a yellow spot. The longer 3 stamens ca. 2 mm, filaments curved, glandular hairy; shorter filaments ca. 6 mm long, glabrous; anthers purple-blue. Ovary ovoid, glabrous; style glandular; stigma 3-lobed, glandular.

Flowering & fruiting: November- February

Native range: South America

Distribution: Naturalised in the Paletropics

Occurrence in Maldives: Occasional in water logged marshy areas

Uses: The plant is an excellent source of biomass for phytoremediation and waste water treatment. It is used as a carotene-rich vegetable and young leaves and petioles are cooked and eaten. The extract has bioherbicidal properties. Its fibres are used to make furniture, handbags and rope.

Threat & damage: It is one of the most noxious invasive plants in the aquatic habitats. The plant was introduced outside its native range as an ornamental for the attractive flowers. Under suitable environmental conditions, it can spread rapidly to form vast monotypic colonies in lakes and rivers adversely affecting aquatic biodiversity, fishing and water transport.

Management: Mechanical removal, use of biocontrol agents and careful use of herbicides are to be integrated to achieve good control of the weed.

Eleusine indica (L.) Gaertn.



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Synonym: *Cynosurus indicus* L.

Family: Poaceae/Gramineae

Local name (Dhivehi): Huibinbi

English names: Crab grass, Goose grass

Description: Annual herbs; culms tufted. Leaves 5-25×0.4-0.6 cm, linear, base rounded, blunt at apex, often folded; sheaths keeled, softly pilose; ligule truncate, membranous. Spikes digitate or subdigitate, 2-18, each 3-8 cm long. Spikelets 4-6 mm long, ovate or oblong, 3-6-flowered. Lower glume 1.5-2.5×0.5-1 mm, lanceolate, keeled, chartaceous, 3-nerved; upper glume 2-3×1 mm, oblong, keeled, chartaceous, 5-nerved; lemmas 2-3×1.5-2 mm, ovate-oblong, chartaceous, 3-nerved, sub acute; paleas 2-2.5×1 mm, oblong-elliptic, 2-keeled, 2-nerved. Stamens 3; anthers ca. 0.5 mm long. Ovary ca. 0.5 mm long, elliptic; stigmas ca. 0.5 mm long, violet. Caryopsis sub globose, deeply grooved on one side, transversely rugose.

Flowering & fruiting: Throughout the year

Native range: Africa and temperate and tropical Asia

Distribution: The tropics and sub-tropics

Occurrence in Maldives: Common in open areas

Uses: The seeds, when cooked, are edible and sometimes used as a famine food. In traditional medicine, the whole plant is used as a depurative, diuretic, febrifuge, laxative and sudorific. It is also used in treating liver complaints.

Threat & damage: The plant is a principal weed over 42 countries posing threat to several major crops including rice, maize, sweet potato, banana, pineapple, mango, cacao and vegetables.



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Emilia sonchifolia (L.) DC. ex DC.



5; anthers 1-1.5 mm long. Ovary ca. 1.5 mm long; style-arms acute. Achenes 1-2 mm long, 5-ribbed, hispid; pappus white silky, 5-6 mm long.

Flowering & fruiting: July – December

Native range: Central and South America

Distribution: Widely distributed in the tropics and subtropics

Occurrence in Maldives: Common in open areas

Uses: The plant is useful in treating infantile tympanitis, gastropathy, diarrhea, otalgia, ophthalmia, nyctalopia, cuts and wounds, intermittent fevers, pharyngodynia and asthma. The leaves are rubbed on the forehead to relieve head ache.

Threat & damage: A common weed which can affect the growth of native species.



Synonyms: *Cacalia sonchifolia* Hort ex L., *Crassocephalum sonchifolium* (L.) Less.

Family: Asteraceae/Compositae

Local name (Dhivehi): Kirikulhla

English name: Lilac tasselflower

Description: Erect or diffuse herbs. Leaves radical and cauline; radical leaves 4-10×1-3 cm, lyrate-pinnatifid with large terminal lobes, semi-orbicular; cauline leaves small, obovate to spatulate. Heads homogamous, not rayed, 1-3 on long slender peduncles. Involucral bracts cylindric, uniseriate, 6-8 mm long, oblong-lanceolate. Florets bisexual; ligules 0. Corolla pink, 3-3.5 mm long, wider to the mouth, lobes 5. Stamens

Epiphyllum oxypetalum (DC.) Haw.



Synonym: *Cereus oxypetalus* DC.

Family: Cactaceae

Local name (Dhivehi): Thandhiraiymaa

English names: Dutchman's pipe, Queen of the night, Orchid cactus

Description: Unarmed succulent subshrubs; primary stems terete, laterals flat, to 30×10 cm, elliptic-acuminate, green, margins undulate-crenate. Flowers campanulate, to 30×15 cm, nocturnal, nodding; tube to 20×1 cm, longer than limb; scales numerous, near apex. Perianth bright rose; outer tepals narrow, reddish, inner ones to 2.5 cm wide, white. Stamens numerous, elongate, in 2 series.

Flowering & fruiting: June - September

Native range: Central and Northern America

Distribution: Widely grown as an ornamental plant

Occurrence in Maldives: Grown in home gardens

Uses: The plant is an expectorant and sedative. It is useful in clearing the lung for suppressing cough, for cooling blood and relieving haemorrhage.



Erythrina variegata L.



Synonyms: *Chirocalyx candolleanus* Walp., *Chirocalyx divaricatus* Walp.

Family: Fabaceae - Papilionoideae

Local names (Dhivehi): Faiy kurehi, Berebedhi

English names: Indian coral tree, Tiger's claw

Description: Deciduous trees; bark yellowish or greenish-grey, smooth, peeling off in papery flakes; branches with black prickles, deciduous. Leaves trifoliate, alternate; rachis 17-21 cm, slender, pulvinate, leaflets 10-13×8-13 cm, widely ovate, rhomboid or deltoid-ovate, base truncate or obtuse, apex acuminate; 3 ribbed from base; lateral nerves 4-7 pairs. Flowers bright red, in dense racemes. Calyx spathaceous, oblique, recurved, split to the base on one side, 5-toothed at the tip. Petals 5, sessile, standard 6.5×2.5 cm, oblong-elliptic, apex obtuse, wings 1.5×1 cm, obovate, keel 1.5×1.7 cm, oblong-falcate. Stamens 10, monadelphous, alternately longer and shorter. Fruit a pod 15-30.5 cm, constricted between seeds, dehiscent; seeds 6-8.

Flowering & fruiting: March – April

Native range: Asia-Pacific region and Eastern Africa

Distribution: Asia-Pacific and Africa

Occurrence in Maldives: Planted in farming areas

Uses: An ornamental tree with soft wood. The tree is commonly used as a support for vine crops, shade tree and live fence posts. The leaves are useful as a fodder and green manure. In traditional medicine, the leaves form a remedy for diseases of the urinary tract, inflammations, tooth-ache, rheumatism and joint pains.



Euphorbia cyathophora Murray



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Synonyms: *Euphorbia barbellata* Engelm.,
Euphorbia pandurifolia Roth

Family: Euphorbiaceae

Local name (Dhivehi): Malaafey

English names: Summer poinsettia, Wild poinsettia

Description: Erect herbs. Leaves alternate below, decussate to whorled above, 5-7 × 1.5-3 cm, obovate to oblanceolate, base acute to attenuate, blade entire or sinuate, margin serrate to entire, apex acute; petiole to 1 cm; floral leaves yellow to red at the basal half. Cyathia 12-15, in terminal clusters. Involucre campanulate, 4×3 mm; gland 1, opposite the pistil, bilabiate, opening narrowly oblong; male florets 20-30, roughly in 5 groups, bracteolate; stalk 2 mm; female: laterally pendulous. Ovary 2.5×3 mm; styles 3, erect, 1mm, forked at apex. Capsule 4 mm across; seeds oblong-globose, 3 mm long, sharply tuberculate.

Flowering & fruiting: December - April

Native range: North and Central America

Distribution: Widespread in the tropics

Occurrence in Maldives: Very common in open areas

Uses: An ornamental plant. The plant contains latex with a caustic effect upon the skin and mucous membranes. In traditional medicine, a decoction or infusion of the stems and fresh or dried leaves is taken as a purgative and laxative to treat stomach-ache and constipation, and to expel intestinal worms. A leaf infusion is used as a wash to treat skin problems, including fungal diseases and abscesses.

Threat & damage: A common weed which can impact the growth of several crop plants.



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Euphorbia heterophylla L.



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Synonym: *Euphorbia prunifolia* Jacq.

Family: Euphorbiaceae

Local name (Dhivehi): Kuriraiyvaa

English names: Wild poinsettia, Painted spurge

Description: Robust annual herbs. Leaves alternate below, opposite above, 4-12×0.3-7 cm, broadly ovate, elliptic, obovate, or panduriform, margins entire to coarsely serrate, apex acute, short-acuminate, base rounded to cuneate, green, sometimes floral leaves white or with splotches of purple at base; petioles 1-4 cm long. Cyathia in dense terminal cymes; involucre 2-2.5 mm high, glabrous, gland 1, cup-shaped with a circular opening, without appendage; staminate flowers numerous. Capsules subglobose, 3-4 mm long, glabrous; seeds

dark brownish gray to black, sometimes mottled, truncate-ovoid, angled, 2-2.5 mm long, coarsely tuberculate, ecarunculate.

Flowering & fruiting: June - August

Native range: Central and South America

Distribution: Pantropical

Occurrence in Maldives: Common in open areas

Uses: The plant is a laxative, purgative, lactogenic and also reported to have wound healing, antimicrobial, antinociceptive, anti-inflammatory, antioxidant and anthelmintic properties.

Threat & damage: The plant is a major weed in several countries affecting the growth of crop plants. Aided by fast growth, the plant competes successfully with crop plants for water, nutrients and light.

Euphorbia hirta L.



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Synonyms: *Chamaesyce gemella* (Lag.) Small, *Chamaesyce hirta* (L.) Small

Family: Euphorbiaceae

Local name (Dhivehi): Kiruthona

English names: Asthma herb, Garden spurge, Snake weed

Description: Slender, suberect pubescent herbs. Leaves decussate, 1-2.5×0.7-1.5 cm, broadly oblong to elliptic-lanceolate, apex acute, base obliquely truncate, margin serrulate, hispid on both sides, basally 3-nerved; petiole to 3 mm long. Cyathia aggregated in single or paired axillary clusters. Involucre minute; glands 5, red. Male flowers 4-6, ebracteolate. Female florets laterally pendulous; styles 2-fid from base. Capsule 1.5-2 mm across, pubescent; seeds minute, red, 4-angled, minutely furrowed.

Flowering & fruiting: Throughout the year

Native range: Tropical America

Distribution: Widespread at low altitudes

throughout the tropics and subtropics

Occurrence in Maldives: Very common in open areas

Uses: The plant decoction is used for the treatment of asthma and chronic bronchial infection. In the form of tincture, it is used to treat colic, dysentery and diseases of the genito-urinary tract. The latex of the plant is a remedy for warts and ringworm.



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Euphorbia rosea Retz.



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Synonym: *Chamaesyce rosea* (Retz.) G.L. Webster

Family: Euphorbiaceae

Local name (Dhivehi): Maakiruthona

English name: Rosy spurge

Description: Prostrate or ascending herbs with woody root stock, stem reddish. Leaves opposite, subsessile, 3-10×2-4.5 mm, obliquely obovate or oblanceolate-oblong, base truncate or cuneate, apex obtuse or rounded, margins crenulate, coriaceous. Cyathia few in subterminal, lax clusters, rarely solitary in upper axils. Involucre subcampanulate; lobes triangular-ovate,

3-5-fid; glands 4, appendage unequal, rose coloured. Male florets 4-6, bracteolate. Female florets laterally pendulous. Styles deeply 2-fid; stigma spathulate. Capsule ca. 2.5 mm across; seeds keeled.

Flowering & fruiting: November – January

Native range: Sri Lanka, Peninsular India and Afghanistan

Distribution: South Asia

Occurrence in Maldives: Occasional in forest areas

Uses: Leaves and seeds are used as a vermifuge.



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Euphorbia thymifolia L.



Synonyms: *Anisophyllum thymifolium* (L.) Haw., *Chamaesyce thymifolia* (L.) Millsp.

Family: Euphorbiaceae

Local name (Dhivehi): Maahiruhui

English name: Chickenweed

Description: Prostrate herbs, stem hispid. Leaves opposite, distichous, 2-7×2-4 mm, oblong or suborbicular, apex obtuse, base obliquely cordate, margin serrulate, 1-nerved, subsessile. Cyathia in axillary clusters. Involucre campanulate, ca. 8 mm long; glands 4. Male flowers 1-4, ebracteolate. Female flowers laterally pendulous; ovary tomentose; style 3-forked from base. Capsule ca. 2 mm across, obtusely angled, glabrescent; seeds 4-angular, minutely tuberculate, red.

Flowering & fruiting: November - May

Native range: Mexico to Argentina, the West Indies and the Paleotropics

Distribution: Asia-Pacific region and

Central and South America

Occurrence in Maldives: Occasional in marshy areas

Uses: The fresh plant is considered as vulnerary and galactagogue. It is used in ophthalmia and other eye troubles, sores, atrophy and dysentery. Juice of the plant is a remedy for ringworm, diarrhea and dysentery.



Euphorbia tirucalli L.



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Synonym: *Euphorbia geayi* Costantin & Gallaud

Family: Euphorbiaceae

Local names (Dhivehi): Eggamu murakka, Hundu kiruthona

English names: Indian tree spurge, Milk bush, Pencil bush

Description: Succulent shrubs; branchlets terete, articulated. Leaves deciduous, 5-10 mm long, linear-oblong, base cuneate, apex obtuse to subacute. Cyathia clustered in the forks of the branchlets, shortly pedicelled, mostly female. Involucre campanulate; glands 3-5, transversely oval, peltate, lobes short, hairy. Male florets bracteolate, bracteoles laciniate at tip. Styles short, recurved, 2-lobed. Capsule 5 mm, globose,

cocci compressed, velvety. Seeds ovoid, smooth.

Flowering & fruiting: February – April

Native range: Tropical and subtropical Africa and the Arabian Peninsula

Distribution: Paleotropics

Occurrence in Maldives: Grown in homesteads

Uses: The wood is used for rafters, toys and veneer. The plant is called “petroleum plant” since it produces a hydrocarbon substance similar to gasoline. The stem latex is used externally to get relief from rheumatism and to remove warts. Also used as a remedy for ailments such as spleen enlargement, biliousness, leucorrhoea, dyspepsia, colic and tumors.

Euphorbia tithymaloides L.



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Synonym: *Pedilanthus tithymaloides* (L.) Poit.

Family: Euphorbiaceae

Local name (Dhivehi): Kalhukalhlha

English names: Devil's backbone, Zigzag plant, Jacob's ladder

Description: Erect subshrubs; branchlets zigzag, latex milky. Leaves alternate, elliptic-

ovate, variegated, deciduous. Cyathia terminal, cymose, subtended by petaloid bracts; glands 4, unequal; appendages and perianth absent. Male florets ca. 25, female single; ovary 3-locular; ovule 1 per locule. Capsule of 3 bivalved cocci.

Flowering & fruiting: April – August

Native range: Tropical and subtropical North and Central America

Distribution: Naturalised in the tropics

Occurrence in Maldives: Common in homesteads

Uses: An ornamental plant. The latex can cause skin irritation, inflammation and blisters. In traditional medicine, a tea brewed from the leaves is used to treat asthma, cough, laryngitis, mouth ulcers and venereal disease.



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Evolvulus alsinoides (L.) L.



Synonyms: *Convolvulus alsinoides* L.,
Evolvulus chinensis Choisy

Family: Convolvulaceae

Local name (Dhivehi): Dhikkahui

English names: Slender dwarf morning-glory, Little glory

Description: Prostrate or suberect villous herbs; branches radiating from rootstock. Leaves more or less distinctly in 2 rows, 6-12×4-7 mm, broadly elliptic to elliptic-lanceolate, base rounded or acute, apex subacute, adpressed pilose on both sides; petiole to 2 mm long. Flowers solitary or paired, at axils. Calyx lobes 2-3 mm long. Corolla ca. 1 cm across, rotate, subentire, blue or white. Ovules 2 in each cell. Capsule 1.5-2 mm across, globose, 2-valved; seeds usually 4, minute.

Flowering & fruiting: March - December

Native range: The tropics

Distribution: Widespread throughout the

tropics and subtropics

Occurrence in Maldives: Of rare occurrence in a few uninhabited northern islands

Uses: The plant is bitter, acrid, expectorant, alexipharmic and tonic. A decoction of the root is administered against intermittent fevers. Leaf smoke gives relief in bronchitis and asthma.



Excoecaria agallocha L.



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Synonyms: *Excoecaria affinis* Endl., *Excoecaria camettia* Willd.

Family: Euphorbiaceae

Local name (Dhivehi): Thela

English name: Blinding tree

Description: Trees to 15 m high. Leaves simple, alternate; 3-13×1.5-5 cm, oblong-lanceolate, margin crenulate-serrulate or entire, glossy above; lateral nerves 5-10 pairs, pinnate; petiole to 3 cm. Flowers unisexual, pale green; male flowers in axillary spikes, 3.5-12.5 cm long, 2-3 together in an axil with a series of spirally arranged bracts; each bract subtending one male flower. Female flowers in axillary racemes, 4-8 cm long, 1-2 in each axil; tepals 3, laciniate, closely adpressed to the ovary; ovary superior, tricarpeal, ovules one in each locule, pendulous; styles 3, simple, spreading, recurved; stigma 3, glandular. Fruit a capsule 4-5×8-10 mm, depressed, globose, crustaceous, 3-celled, black; pedicels 3-5 mm long; seeds 3, globose.

Flowering & fruiting: November – February

Native range: Asia-Pacific region

Distribution: Indo-Malaysia to Australia and Pacific islands

Occurrence in Maldives: Rare. Occurs in some of the northern islands.

Uses: Used as a fish poison and as an adjunct to arrow poison. The fresh sap of wood causes intolerable pain if it accidentally gets in to the eye. The juice from the plant is used to treat ulcer and leprosy. A decoction using leaves is remedy in epilepsy.



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Ficus amplissima Sm.



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Synonyms: *Ficus indica* Willd., *Ficus tjiela* Miq.

Family: Moraceae

Local names (Dhivehi): Laami, Laamiaa

English name: Bat tree

Description: Large trees, to 25 m high; aerial roots few; bark greenish-grey, smooth; blaze yellow; exudation milky. Leaves simple, alternate; 5-14×2.5-9 cm, broadly ovate or ovate-oblong, base round, truncate or acute, apex acute, coriaceous; 3-ribbed from base; lateral nerves 8-10 pairs. Stipule to 2.5 cm, lateral, lanceolate; petiole 15-50 mm long, glandular at apex below. Flowers unisexual; inflorescence a syconia, monoecious, geminate, axillary, subsessile, depressed globose; flowers of 4 kinds; male flowers dispense, few; sessile; tepals 2 in pedicellate flowers and 3 in sessile flowers; female flower sessile, tepals 3-4; ovary superior, bean shaped; style filiform, 2 mm; gall flowers similar to female; pedicellate; syconium red or purple when ripe; achenes smooth.

Flowering & fruiting: September - December

Native range: East Asia

Distribution: Asia

Occurrence in Maldives: Common in most of the islands

Uses: The wood has moderate strength and durability. The leaf juice is applied externally on old chronic wounds. The leaf extract possesses anti-inflammatory and antioxidant properties.



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Ficus benghalensis L.



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Synonym: *Ficus banyana* Oken

Family: Moraceae

Local names (Dhivehi): Nika, Kirigas

English name: Banyan tree

Description: Spreading trees, to 30 m high; aerial roots numerous; bark greyish-white, smooth; exudation milky. Leaves simple, alternate, 10-20×5-12.5 cm, ovate, base rounded or subcordate, apex obtuse, margin entire, coriaceous; 3-7-ribbed from base, lateral nerves 4-6 pairs, pinnate, prominent; stipules lateral, 2-2.5 cm long, sheathing. Flowers unisexual; inflorescence a syconia, sessile, in axillary pairs, globose; basal bracts 3, broad, round, glabrous, coriaceous,

persistent. Fruit 1.5-2 cm across, orange to red when ripe, achenes 2×1.5 mm, globose-ellipsoid, dark brown.

Flowering & fruiting: May – August

Native range: Indian subcontinent

Distribution: South Asia; widely grown as an avenue tree

Occurrence in Maldives: Very common in most of the islands

Uses: The tree is sacred to Hindus and Buddhists and planted around temples in India. It is a major avenue tree in Maldives. Various insects living on the tree produce a resinous secretion called lac which is the main ingredient of shellac used to produce French polish. Wood from aerial roots is used as poles and cart yokes. In traditional medicine, the latex is applied externally for treating pains and bruises, and is a remedy for toothache.



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Ficus benjamina L.



Synonyms: *Ficus comosa* Roxb., *Ficus neglecta* Decne.

Family: Moraceae

Local name (Dhivehi): Faiy kudhi nika

English names: Benjamin tree, Golden fig, Weeping fig

Description: Evergreen trees, aerial roots slender; bark grey, smooth; latex milky. Leaves simple, alternate, distichous, 3-12×1.5-6 cm, elliptic or elliptic-ovate, base round, acute or subcordate, apex acute or acuminate, margin entire, glabrous, coriaceous; lateral nerves 6-18 pairs, parallel, prominent; stipules 10-12 mm long, paired; petiole 4-25 mm long, stout, glandular at apex below. Inflorescence a syconia, 8-12×7-10 mm, axillary, sessile, paired, globose or subobovoid; basal bracts 2-3, minute, ovate; orifice circular, slightly raised. Fruit orange-yellow, rarely pink or dark purple; achenes smooth.

Flowering & fruiting: July – December

Native range: South and Southeast Asia

Distribution: India and South China to Solomon Islands

Occurrence in Maldives: Widely planted

Uses: An ornamental plant suitable for diverse climatic conditions. Roots and leaves are boiled in oil and applied on wounds and bruises. The pounded leaves and bark are applied as a poultice in the treatment of rheumatic headaches.



Ficus elastica Roxb. ex Hornem.



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Synonym: *Ficus skytinodermis* Summerh.

Family: Moraceae

Local name (Dhivehi): Rabarugas

English name: Indian rubber tree

Description: A large evergreen tree with dense crown and spreading branches. Trunk massive, bark greyish or reddish brown. Leaves simple, 10-25×8-15 cm, glossy above, oblong or elliptic, base cuneate, margins entire, apex obtusely acuminate; petiole 2.5-6 cm long; cystoliths abundant above, few below; stipules very large, 8-25 cm long, often rosy to pinkish-brown. Syconia sessile, in extra axillary pairs below the leaves, pale-greenish, subtended by 3 caducous basal bracts. Male flowers: pedicellate, dispersed in the interior of receptacle. Female flowers: sessile; sepals 4, free, ovary smooth with subterminal style. Figs ovoid-oblong, 10-12 mm long, 6-8 mm across, pale to yellowish brown.

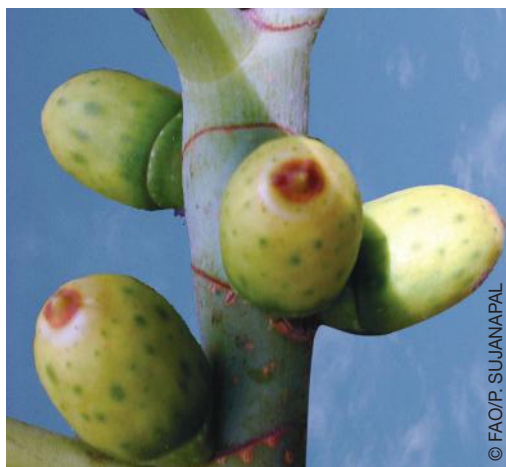
Flowering & fruiting: Throughout the year

Native range: Indo-Malaysia

Distribution: Widespread in the tropics

Occurrence in Maldives: Planted in gardens and as an avenue tree

Uses: The plant has high ornamental value. The very young leaf tips are eaten as a salad. A decoction of the aerial rootlets is used as a vulnerary. Latex can be used for all applications of natural rubber.



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Fimbristylis cymosa R. Br.



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Synonym: *Scirpus strictus* Roxb.

Family: Cyperaceae

Local name (Dhivehi): Kunahui

English name: Button sedge

Description: Perennial herbs, forming tight tufts. Leaves less than half stem length; sheaths 1-2.5 cm, pale brown; blades 1-1.5 mm wide, stiff, frequently falcate, margins barbed towards apex. Inflorescence compact or diffuse with elongate peduncles, of 10 or more solitary spikes, or, in compact inflorescences, spikes sessile and clustered; bracts usually short, margins scabrous; branches compressed, triangular to terete. Spikes 2-5×1-2.5 mm,

ovoid, more or less terete, greyish brown to brown; rachis articulate, castaneous brown, with prominent brown or colourless wings. Stamens 2; anthers with small basal lobes; style brown; stigmas 2 or 3, ciliate. Nut ovoid, lenticular, slightly rugulose, dark brown.

Flowering & fruiting: October - February

Native range: Africa, Asia, Europe, America, Australia and the Pacific Islands

Distribution: In the tropics and subtropics

Occurrence in Maldives: Occasional along the marshy areas

Uses: Used as a ground cover in some countries. Also used as a turf, green manure and fodder for cattle. The roots are given for dysentery in traditional medicine in India.

Threat: The plant is reported as a weed in some agricultural environments such as in taro, sweet potato and rice fields.



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Fimbristylis polytrichoides (Retz.) R. Br.



Synonyms: *Scirpus polytrichoides* Retz.,
Fimbristylis albescens Steud

Family: Cyperaceae

Local name (Dhivehi): Vinahui

English names: Marsh sedge, Rusty sedge

Description: Erect herbs, stem tufted, setaceous. Leaves canaliculated, acicular, 4-20 cm, apex acute; ligule shortly hairy; sheaths membranous. Inflorescence terminal or pseudolateral, with a solitary spikelet; involucre bract 1, stiff, 1-2 cm. Spikelet oblong-ovoid, subterete, to 1 cm, acute; rachilla winged; glumes lanceolate, thin; keel 1-3-nerved. Stamens 2. Style 2-fid, apex shortly ciliate, base dilated. Nut obovoid, biconvex, to 1 mm, acutely angled, grey-fulvous, verruculose, obscurely striate, with isodiametric cells, umbonulate, shortly stipitate.

Flowering & fruiting: October - November

Native range: Tropical Africa, Southeast Asia, New Guinea and Australia

Distribution: Throughout the tropics from Africa to Australia

Occurrence in Maldives: Common in open areas and open canopy in forests

Uses: No known use



Flacourtia jangomas (Lour.) Raeusch.



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Synonyms: *Stigmarota jangomas* Lour., *Flacourtia cataphracta* Roxb. ex Willd.

Family: Flacourtiaceae

Local name (Dhivehi): Umbuvah

English names: Puneala plum, Indian plum, Coffee plum

Description: Small trees, to 10 m high, dioecious; young branches with simple or branched thorns; bark pale brown to copper-red. Leaves alternate, 4-9×2.5-5 cm, oblong-ovate to lanceolate, rounded to broadly cuneate at base, subserrate or crenate at margin, obtusely long acuminate at apex, pinkish brown when young; lateral nerves 4 or 5 pairs; petiole 4-7 mm long. Flowers in axillary, subcorymbose racemes; pedicels very slender, 5-10 mm long. Disc faintly lobed, fleshy, white or orange-yellow. Male flower buds globose, ca. 2 mm; stamens numerous, free; anthers extrorse.

Female flower buds ovoid, incompletely 4-6 loculed by false septa; stigma 4-6, dilated. Fruit a berry, subglobose, angled, apiculate, 1.5-2.5 cm across, scarlet red or dark purple when ripe; styler column persistent, conic, terminating in 4-8 minute stigmatic points; seeds 8-12, flat.

Flowering & fruiting: November - April

Native range: Southeast Asia

Distribution: Southeast Asia, Eastern Australia, Pacific Islands and East Africa

Occurrence in Maldives: Cultivated in homesteads

Uses: Fruit is edible. The bark and leaves are useful as a remedy for ulemorrhagia and stomatitis. The fruits are used in treating hyperdipsia, rheumatism, nausea, dyspepsia, flatulence, colic, inflammation, skin disease, diabetes, jaundice and tumours.

Flagellaria indica L.



Synonyms: *Flagellaria angustifolia* Wall., *Flagellaria minor* Blume

Family: Flagellariaceae

Local name (Dhivehi): Narunaviyo

English names: False rattan, Bush cane

Description: Climbing perennial shrubs. Leaves sessile, 10–25×3–5 cm, lanceolate, base sheathing, apex finely acuminate, cirrhose. Flowers bisexual, sessile, small, in terminal 6–15 cm long panicles. Perianthlobes 6, cream-coloured, 2–2.5 mm long. Stamens 6, exserted; filaments ca. 2.5 mm long, persistent; anthers linear. Ovary ca. 1.5 mm long, trigonous; stigma 3, long and spreading. Drupe 5–7 mm across, globose, 1–3-seeded, red or finally black.

Flowering & fruiting: July - October

Native range: Tropical Asia

Distribution: Widespread in the tropics and subtropics

Occurrence in Maldives: Fairly common in some northern islands in mangrove habitats

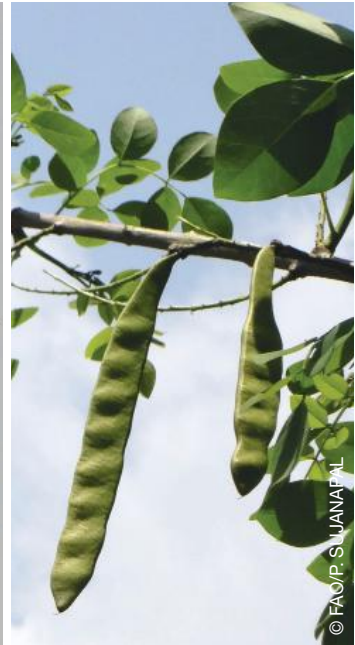
Uses: The mature stem is used for making mats, baskets and fish traps. Young leaves are used as a hair wash. In some countries, the plant is used as a contraceptive which is thought to cause sterility in women. The plant has also demonstrated antimicrobial activity.



Gliricidia sepium (Jacq.) Walp.



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Synonyms: *Robinia sepium* Jacq., *Gliricidia lambii* Fernald

Family: Fabaceae - Papilionoideae

Local name (Dhivehi): Malthass

English name: Spotted Gliricidia

Description: Small trees, bark grey. Leaves odd-pinnate, alternate, spiral; rachis 8-30 cm; leaflets 7-21, opposite, 3-8×2-5 cm, ovate-oblong or elliptic-ovate, base obtuse or oblique, apex acuminate or obtuse, glaucous and puberulent beneath; lateral nerves 5-10 pairs. Flowers 2 cm across, rose-pink, in up to 20 cm long racemes; pedicels to 2 cm. Calyx campanulate, to 5 mm; lobes obscure. Petals exerted; standard 2×1.5 cm, orbicular, with 2 callosities above claw; wings to 2×0.6 cm, oblong, auricled; keels 2.2×0.8 cm, obovate, incurved. Stamens 9+1; staminal tube 1.6 cm; vexillary stamen free; filaments unequal. Fruit a pod, to 15 cm long.

Flowering & fruiting: March - May

Native range: Mexico and Central America

Distribution: Introduced and widely grown in the tropics

Occurrence in Maldives: Common in homesteads and farming areas

Uses: A multipurpose tree used as live fence, fodder, shade, support, firewood, green manure and bio-pesticide. In traditional medicine, the bark is used against eczema and other skin diseases.



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Gloriosa superba L.



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Synonyms: *Clinostylis speciosa* Hochst., *Eugone superba* (L.) Salisb.

Family: Liliaceae

Local names (Dhivehi): Vihalagondi, Vehathan

English names: Climbing lily, Glory lily, Malabar glory lily

Description: Herbaceous climbers with tuberous roots. Leaves subsessile, alternate, opposite or whorled, 5-13 × 1.5-4 cm, ovate-lanceolate, base cordate or amplexicaul, apex acuminate, ending in a tendril. Flowers bisexual, axillary, solitary or in few-flowered, terminal racemes; pedicel to 7 cm long. Perianth-lobes 6, free, 5-7 × 0.8-1.2 cm, linear-oblong, reflexed or spreading, base narrow, margin undulate, apex acuminate, yellowish below and reddish above. Stamens 6; filaments 3-4 cm long; anthers oblong-linear, versatile. Ovary 1 × 0.5 cm, oblong, 3-locular; ovules

numerous; style to 4 cm long, deflexed; stigmas 3. Capsule 3-5 × 1-2 cm, ellipsoid-oblong; seeds many, 3 mm, globose, warty.

Flowering & fruiting: July – December

Native range: Sub-Saharan Africa

Distribution: Tropical and Southern Africa and tropical Asia

Occurrence in Maldives: Fairly common in both forests and open areas.

Uses: Has high ornamental value because of its attractive flowers. All parts of the plant, especially the tubers, contain toxic alkaloids including colchicine which is fatal if ingested. Colchicine is useful in the treatment of gout, intestinal worms, infertility, wounds, chronic ulcers, arthritis, cholera, colic, kidney problems and typhus. It has also been used as an antidote for snake bite, as a laxative, and to induce abortion.

Guettarda speciosa L.



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Synonyms: *Cadamba jasminiflora* Sonn.,
Nyctanthes hirsuta L.

Family: Oleaceae

Local name (Dhivehi): Uni

English names: Sea randa, Zebra wood,
Indian lavender

Description: Small trees. Leaves simple, opposite, 10-15 × 5 cm., broadly lanceolate or ovate, base rounded, apex acuminate, nerves 12-14 pairs, prominent; petiole to 4 cm long; stipules short, sheathing. Flowers in axillary pedunculate, corymbose cymes, white, fragrant. Calyx-tube longer and broader. Corolla-tube much stouter, 7-9 cm; limb 6-9-lobed, 10 cm across; lobes narrowly ovate-oblong, obtuse. Fruit globose, 2 cm across, seeds many.

Flowering & fruiting: March – October

Native range: Eastern Africa, tropical and subtropical Asia, Australia and the Pacific

Islands

Distribution: Pantropics

Occurrence in Maldives: Major tree species in the natural habitats

Uses: The wood is hard and durable and is used for small scale constructions and to make fishing poles, floats, spears, etc. The leaves help to relieve headaches and aches in limbs. The flowers are used in garlands and the essential oil obtained is used as a perfume.



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Hedychium coronarium J. König



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Synonyms: *Hedychium spicatum* Lodd.,
Kaempferia hedychium Lam.

Family: Zingiberaceae

Local name (Dhivehi): Karankaa

English names: Butterfly ginger lily,
Garland flower, White ginger

Description: Rhizomatous herbs, leafy stem to 1.5 m high, robust, densely clumped; rhizome horizontal. Leaves to 30 × 10 cm, oblong, acuminate, glabrate; ligule 2 cm long, acuminate. Spike 15 × 7 cm, ovoid; bracts 5 × 2 cm, oblong, obtuse, glabrous. Flowers 2-4 in each bracts. Calyx 4 cm long, not split, glabrous. Corolla tube 9 cm long, narrow, glabrous, lobes 3.5 cm long, slender, glabrous. Lip 6 × 6 cm; lobes emarginate, white; anthers 1.5 cm long,

filaments shorter than lip.

Flowering & fruiting: October–December

Native range: The Himalayas and Southern China

Distribution: Widely cultivated. Naturalised in several countries.

Occurrence in Maldives: Grown as an ornamental plant

Uses: The plant is mainly grown for ornamental purposes. Its fragrant flowers are extensively used in garlands and bouquets and the essential oil from the rhizomes and flowers is used to make quality perfume. The rhizomes are edible and have been used for starch extraction. The rhizomes and stem bases are diuretic, antisiphilitic and possess antifungal properties.

Hedyotis neesiana Arn.



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Synonyms: *Hedyotis nitida* Wight & Arn.,
Oldenlandia nitida (Kurz) Gamble

Family: Rubiaceae

Local name (Dhivehi): Nithu

English name: Hedyotis

Description: Prostrate herbs; stem 4-angled, coarsely scabrid. Leaves simple, opposite, to 7 × 1 cm, linear-lanceolate to elliptic, coriaceous, pale below; stipule 8 mm long, ovate, rounded at apex, strongly long-toothed, villous. Flowers sessile in axillary clusters, 1-3 together. Calyx 4 mm long, lobes acute, ciliate. Corolla 4-5 mm long, lobes spreading, white. Capsule 3 × 2 mm, ovoid, glabrous; seeds angled; deep brown, ovoid, glabrous.

Flowering & fruiting: September–December

Native range: Peninsular India and Sri Lanka

Distribution: India to West Malaysia

Occurrence in Maldives: Common in open areas

Uses: No known uses



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Hernandia nymphaeifolia (J. Presl) Kubitzki



Synonyms: *Biasolettia nymphaeifolia* C. Presl, *Hernandia peltata* Meisn.

Family: Hernandiaceae

Local names (Dhivehi): Kandhu, Mas kandhu

English name: Lantern tree

Description: Evergreen trees, to 20m high, bark greyish. Leaves simple, rounded-cordate, 7-20 × 6-15 cm, petioles to 8 cm, peltate; monoecious. Inflorescence axillary, long pedunculate, corymbose cymes, flowers small, white, clustered together usually in groups of three, the male flowers having 3 petals and the females 4. Fruit a drupe, 2.5 - 3.5 cm across, surrounded by a white or pink fleshy covering with a hole at one end; seed one, black, globose, ca. 5 mm diameter.

Flowering & fruiting: Throughout the year

Native range: Eastern Polynesia to Tropical East Africa

Distribution: Throughout the tropics

Occurrence in Maldives: Very common as a major tree associate in forest areas.

Uses: The soft wood is used to make fishing rods, fish net floats, wooden sandals, fan handles, drawing boards, canoe accessories and furniture. Leaves, roots, bark and seeds are useful to treat bone fractures. The leaves are useful to relieve headaches in children.



Hibiscus rosa-sinensis L.



Synonyms: *Hibiscus arnottii* Griff. ex Mast., *Hibiscus boryanus* DC.

Family: Malvaceae

Local name (Dhivehi): Saimaa

English names: Shoe flower, Hibiscus, Tropical Hibiscus

Description: Shrubs; stems lenticellate, woody. Leaves alternate, ovate to ovate-lanceolate, truncate or tapering at base, serrate, crenate or entire, acute to acuminate at apex, 5-11 × 3-6 cm, 3-5 nerved at base; petioles 1.5-4 cm long, simple-hairy; stipules lanceolate or subulate, 3-11 mm long. Flower axillary, solitary; pedicels 2-8 cm long, jointed above middle. Epicalyx lobes 5-8, connate at base, lanceolate, 5-15 mm long, sparsely stellate-pubescent. Calyx campanulate, 1-3 cm long; lobes connate to middle, lanceolate, 1.5-2 cm long, stellate and glandular-pilose outside. Corolla infundibular, 6-12 cm across, red, white, pink, yellow or orange yellow; petals obovate and entire. Staminal column to 5 cm long, exserted beyond corolla, antheriferous

in upper half. Capsules oblong-rounded (rarely formed).

Flowering & fruiting: Throughout the year

Native range: East Asia

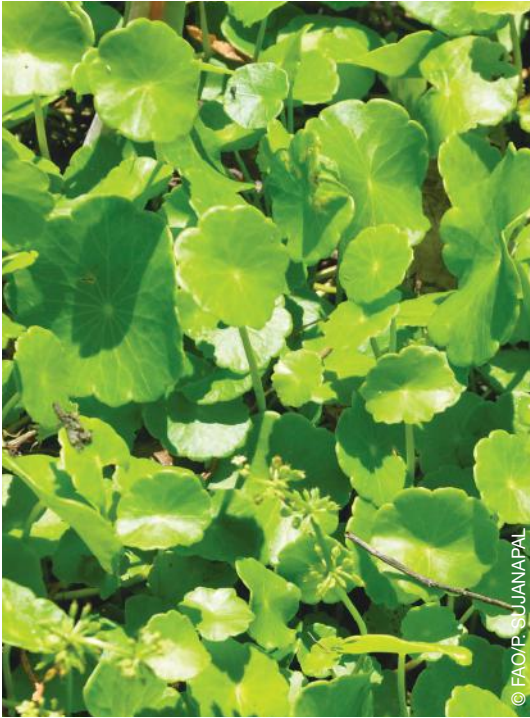
Distribution: Widely grown in tropical and subtropical countries

Occurrence in Maldives: Very common in homesteads

Uses: Common ornamental plant. The leaves and flowers are used as hair tonic. Flowers are also used as a cosmetic in skin care. Its petals are used as a pH indicator.



Hydrocotyle verticillata Thunb.



Synonyms: *Centella homalocarpa* Drude, *Centella verticillata* (Thunb.) Fourc.

Family: Apiaceae / Umbelliferae

Local name (Dhivehi): Farihi

English names: Whorled pennywort, Whorled marsh-pennywort

Description: Prostrate herbs, rooting at nodes, stem procumbent. Leaves erect, circular or reniform 1.5-3.5×3-6 cm, shallowly 5-12 lobed, lobes rounded, both surfaces sparsely hairy or covered with purplish hairs, secondary nerves palmate, petiole 3-18 cm. Inflorescence thyriform spike, peduncle 3-8 cm long, flowers in 1-15 flowered umbels; petals white with yellow or purplish red glands, style 0.8-1 mm, spreading. Fruit brown to purplish red, heart-shaped or spherical, 1.0-1.2×1.5-2 mm.

Flowering & fruiting: Throughout the year

Native range: Hawaii and continental USA

Distribution: Cosmopolitan

Occurrence in Maldives: Fairly common along the margin of marshy areas

Uses: Grown in aquarium. The plant juice is used as a remedy for fever and poultice for wounds and boils. Decoction of the plant is used for abscesses, colds, coughs, hepatitis, influenza, pruritus, sore throat, headache and urinary problems.



Hymenocallis littoralis (Jacq.) Salisb.



Synonym: *Pancratium littorale* Jacq.

Family: Amaryllidaceae

Local name (Dhivehi): Kurikihaaffilaa

English names: Spider lily, Beach lily

Description: Bulbous herbs, bulbs to 8 cm across, globose. Leaves radical, 2-ranked, oblong, to 100 × 5 cm, sessile, acute. Scape to 60 cm; umbels ca. 8-flowered; spathes 2, equal, 6 cm. Perianth tube 12 cm; lobes 6, linear, 12 × 0.3 cm, white, erect. Stamens 6, inserted in the throat, basally connected by a membrane, 3 cm; free part of filaments 6 cm. Ovary inferior, 3-celled; ovules 4-5 per cell, sub-basal; style longer than stamens.

Flowering & fruiting: Throughout the year

Native range: Coastal regions of Southern Mexico and Central America

Distribution: Asia-Pacific region, the USA, Caribbean Islands and the UK

Occurrence in Maldives: Occasional in natural habitats and in homesteads

Uses: The plant, grown as an ornamental, possesses antioxidant, cytotoxic, anti-tumor, anticancer and antineoplastic properties. The bulb is used for wound healing. The roots boiled in water are used against hydrocoele.



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Indigofera longiracemosa Baill.



Synonym: *Indigofera longeracemosa* Baill.

Family: Fabaceae - Papilionoideae

Local name (Dhivehi): Vihafilaa

English name: Indigo

Description: Erect subshrubs; branchlets terete. Leaves pinnate; leaflets 7-9, opposite, obovate, odd one larger, 8-16 × 4-10 mm, base cuneate, apex obtuse, mucronate, membranous, both surfaces appressed, pubescent. Racemes axillary, to 2 cm long. Flowers dense; corolla pinkish-purple. Pods cylindrical, straight, shortly beaked. Seeds 6-10, obscurely angular.

Flowering & fruiting: July – November

Native range: Kenya, Tanzania, Madagascar, India

Distribution: Tropical Asia and Africa

Occurrence in Maldives: Fairly common in

open areas

Uses: The roots are useful in promoting growth of hair and in gastropathy, asthma, splenomegaly, chronic bronchitis, ulcers, cephalagia and skin diseases. The plant possesses antimicrobial and anti-poisonous properties. Leaves are used for the treatment of skin diseases.



Indigofera tinctoria L.



Synonyms: *Indigofera cinerascens* DC.,
Indigofera indica Lam.

Family: Fabaceae - Papilionoideae

Local names (Dhivehi): Kudhihithi, Vihafilaa,
Valu muranga

English names: Black henna, True indigo,
Indian maddar

Description: Suffrutescent subshrubs; stem adpressed-pubescent. Leaves pinnately 5-13-foliolate; leaflets opposite, 5-22 × 5-12 mm, elliptic to obovate, base and apex rounded, darkening on drying. Inflorescence axillary, spicate-racemose, many-flowered. Flowers 5-7 mm long, red; pedicels ca. 1 mm long. Calyx 2-3 mm long, pubescent; lobes narrow lanceolate, acuminate. Petals reddish; standard ca. 4 mm long, suborbicular. Ovary 8-12-ovuled, hairy.

Pods 2-3 cm long, ca. 2 mm wide, linear, straight or slightly curved, 8-12-seeded.

Flowering & fruiting: July – January

Native range: The Malaysian Archipelago

Distribution: Widely cultivated in the tropics

Occurrence in Maldives: Occasional in open areas and homesteads

Uses: The plant was the main source of the indigo dye used for textile dyeing and printing. Leaves are also used to make hair dye and medicated hair oil. In traditional medicine, the root and leaf decoction is given for abdominal disorders, fever, arthritis and all types of toxicities.



Ipomoea aquatica Forssk.



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Synonyms: *Ipomoea reptans* Poir, *Ipomoea repens* Roth

Family: Convolvulaceae

Local name (Dhivehi): Kankoon

English names: Water-spinach, Water morning glory

Description: Creeping or floating aquatic herbs, stems hollow, rooting at the nodes. Leaves alternate, 5-10×2-6 cm, varies in form, usually oblong-lanceate or narrowly triangular, base hastate, apex acute; petiole 6-10 cm long. Flowers purplish-white, solitary or few in cymes. Sepals subequal, 6-8 mm long, oblong-lanceolate, membranous, glabrous. Corolla funnel-shaped, ca. 5 cm long, pale purple to nearly white, tube to 2 cm long, lobes obscure. Stamens included, filaments unequal, hairy at the base. Ovary glabrous. Capsule globose; seeds 2 or 4, minutely pubescent.

Flowering & fruiting: November- March

Native range: Tropical Africa and Asia

Distribution: Asia, Africa, Australia, Pacific Islands, South America

Occurrence in Maldives: Common in marshy areas

Uses: Leaves are used as delicious vegetable. Fresh leaves and stems are rich in iron and used as a laxative to get relief from gastric disorders. The plant is anthelmintic, carminative and anti-inflammatory. The whole plant is useful in fever, jaundice, bronchitis, piles and liver complaints.

Threat & damage: The plant is highly invasive. It can form dense mats over the surface of water bodies displacing native plants and threatening aquatic biodiversity. Dense canopies formed by it over ponds and retention basins create stagnant water conditions favouring breeding by mosquitos. The plant also occupies muddy banks along streams. Eradication is a challenge since aquatic herbicides cannot be used in all invaded areas.



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Ipomoea batatas (L.) Lam.



Synonyms: *Convolvulus batatas* L.,
Convolvulus apiculata M. Martens & Galeotti

Family: Convolvulaceae

Local name (Dhivehi): Kattala

English names: Boniato, Camote, Sweet potato

Description: Twiners; stem rooting at nodes, root tuberous. Leaves variable, from cordate to ovate, entire, dentate or often deeply lobed, 5-10 cm long. Inflorescences of solitary or few-flowered cymes. Flowers absent in some varieties, pedicel 3-12 mm long. Sepals oblong, the outer sepals acuminate and cuspidate, 10-15 mm long, mostly pubescent or only ciliate. Corolla with a lavender to purple-lavender limb and darker throat, white in some varieties, 4-7 cm long. Fruits rarely formed, ovoid, glabrous; seeds rotund, glabrous.

Flowering & fruiting: December-March

Native range: Tropical America

Distribution: Widely cultivated in the tropics and subtropics

Occurrence in Maldives: Cultivated in homesteads

Uses: An important tuber crop. The tuberous roots are sweet, laxative, diuretic, aphrodisiac and tonic. They are useful in burning sensation, constipation and general weakness.



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Ipomoea marginata (Desr.) Verdc.



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Synonyms: *Convolvulus marginatus* Desr.,
Ipomoea sepiaria Koenig ex Roxb.

Family: Convolvulaceae

Local name (Dhivehi): Thaafilemaa

English names: Purple heart glory, Hedge
bind-weed

Description: Twining herbs. Leaves simple, alternate, triangular-cordiform, 5-8×3-5 cm, apex acute-apiculate, base cordate, thinly pubescent, petiole 1-2 cm long. Cymes sub-umbellate, axillary. Sepals sub-equal, obovate, glabrous. Corolla pinkish-white, ca. 3 cm across, salver-form. Stamens included. Capsule globose; seeds pubescent.

Flowering & fruiting: December - March

Native range: Not clearly known

Distribution: Paletropics

Occurrence in Maldives: Fairly common along the side of wetlands

Uses: The plant is useful in burning sensation, strangury, hyperdipsia, general debility and sterility in women. The roots are used as a remedy to swelling of the body due to viper bite.



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Ipomoea obscura (L.) Ker Gawl.



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Synonyms: *Convolvulus obscurus* L., *Ipomoea luteola* R. Br.

Family: Convolvulaceae

Local name (Dhivehi): Thaalhafilimaa

English name: Obscure morning glory

Description: Slender twining herbs. Leaves simple, alternate, 2.5-6×2-4 cm, ovate to cordate, apex acuminate, base cordate; petiole to 3 cm long. Flowers solitary or in subumbellate cymes; pedicel to 1-1.5 cm long. Sepal 4-8 mm long, ovate-lanceolate, apex acute-apiculate. Corolla yellowish, throat purplish, 1.5-2.5 cm long, ca. 2.5 cm across, campanulate. Stamens 5, villous at base. Ovary ca. 1.5 mm long, conical; stigma capitate. Capsule 6-8 mm across, subglobose, apically beaked; seeds ca. 5 mm

long, ovoid, black, thinly pubescent.

Flowering & fruiting: October - March

Native range: Tropical Africa, Asia and the South Pacific

Distribution: Africa, Asia-Pacific region and the West Indies

Occurrence in Maldives: Occasional along the side of marshy areas

Uses: Grown as an ornamental and also as fodder for livestock. The leaves are used as vegetable in Kenya. Dried and powdered leaves are used to treat aphthae. A decoction made from the roots is taken against dysentery. The plant is reported to have rejuvenating, diuretic, laxative, deobstruant, antibacterial and anti-inflammatory properties.

Ipomoea pes-caprae (L.) R. Br.



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Synonyms: *Convolvulus bilobatus* Roxb., *Convolvulus pes-caprae* L.

Family: Convolvulaceae

Local name (Dhivehi): Bodu veliveyo

English names: Goat's foot creeper, Beach morning glory

Description: Stout creepers. Leaves simple, shallowly 2-lobed, 2-5×3-6 cm, broadly orbicular, base truncate, lateral nerves ca. 6 pairs, coriaceous. Flowers solitary or few in axillary cymes. Calyx lobes 5, unequal, ovate, acuminate, outer surface wrinkled. Corolla pink, ca. 5 cm across, funnel-shaped. Stamens 5. Style long, pilose. Capsule subglobose, glabrous. Seeds brownish-tomentose.

Flowering & fruiting: November – March

Native range: Tropical coastlines around the world

Distribution: Circumtropical

Occurrence in Maldives: Common in sandy sea shores

Uses: Suitable as a ground cover in sunny, well-drained sites. Leaf juice is used as a first aid to jellyfish stings. The plant is cooling, anti-inflammatory, astringent to bowels, stomachic and laxative. The leaves are applied externally for rheumatism and colic.



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Ipomoea quamoclit L.



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Synonyms: *Quamoclit pinnata* (Desr.) Bojer., *Convolvulus quamoclit* (L.) Spreng.

Family: Convolvulaceae

Local name (Dhivehi): Sathaavareemaa

English names: Cardinal vine, Morning-glory, Red jasmine

Description: Slender twining herbs. Leaves alternate, pinnately dissected, 1.5-4.5 cm long, lobes many, 1-1.5 cm long, very narrowly linear, glabrous. Flowers solitary, axillary or in few flowered axillary cymes; peduncles 4-5 cm long; pedicels 1-2 cm long. Calyx lobes 0.4-0.5 cm long, lanceolate. Corolla red; lobes 0.4-0.6 × 0.25-0.3 cm, ovate. Filaments unequal, exserted. Ovary 0.2-0.3 cm long, 4-celled; stigmas capitate. Capsule 0.8-1 × 0.5-0.6 cm, ovoid; seeds 4, 0.4-0.5 × 0.1-0.15 cm, compressed, conical, black on drying.

Flowering & fruiting: October - December

Native range: Tropical America

Distribution: USA, Northern and Eastern Australia and several Pacific islands

Occurrence in Maldives: In homesteads

Uses: An ornamental plant. Pounded leaves are applied to bleeding piles and crushed leaves used as a plaster to carbuncles.

Threat: The plant poses a minor threat of invasion especially under warm climates.



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Ipomoea violacea L.



Synonyms: *Convolvulus tuba* Schtdl.,
Ipomoea macrantha Roem. & Schult.

Family: Convolvulaceae

Local name (Dhivehi): Andaapool

English names: Beach moon flower, Sea moon flower

Description: Large twiners. Leaves simple, alternate, to 22 × 10 cm, broadly ovate, base deeply cordate, apex acuminate. Flowers 1-3, greenish-white, on long axillary peduncles. Sepals orbicular, rounded at apex, accrescent, clasping the fruits when young, deflexed later. Petals funnel-shaped, white, tube to 15 cm long. Stamens and style included. Capsule subglobose, 2 cm across; seeds 4, black, pubescence all over, sericeous shaggy hairs on the margins.

Flowering & fruiting: August - October

Native range: Unknown

Distribution: Pantropical

Occurrence in Maldives: Occasional in natural habitats

Uses: The root is used as a diuretic, laxative, expectorant and for coughs. Leaf powder is effective for relief from headaches and indigestion.



Ipomoea littoralis Blume



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Synonyms: *Convolvulus denticulatus* Desr.,
Convolvulus arenarius Vahl.

Family: Convolvulaceae

Local name (Dhivehi): Thaalhafili

English name: Coastal morning-glory

Description: Creeping vines. Leaves simple, alternate, cordate, 4-8×3.5-6 cm, glabrous; petioles 3.5-5 cm long. Flowers axillary, funnel shaped, 5-lobbed. Sepals ca. 8 × 4 mm. Corolla ca. 4 cm, centre much darker, reddish purple in colour. Stamens variable in length; pollen minutely spinulose. Disk fleshy, shallowly cup-shaped, surrounding the base of the ovary. Fruits brown, depressed globular, 5 × 6-10 mm; calyx lobes persistent at the base; lobes 7-8×4-5 mm. Seeds to 4 per fruit, black, ca. 4 mm.

Flowering & fruiting: Throughout the year

Native range: Old World

Distribution: Mauritius, Seychelles, Madagascar and the Asia-Pacific region.

Occurrence in Maldives: Occasional in open areas

Uses: Leaves are used in treating pain after child birth and flowers as a haemostatic in menstruation. Stem is a remedy for loss of appetite in humans. Leaves pounded and mixed with coconut oil are used to treat boils.



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Ischaemum muticum L.



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Synonyms: *Andropogon repens* Steud.,
Ischaemum glabratum J.Presl

Family: Poaceae / Gramineae

Local name (Dhivehi): Thunbulhi hui

English names: Seashore centipede grass,
Drought grass

Description: Sub-erect stoloniferous herbs, perennial. Leaves 4-12 × 0.3-0.6 cm, lanceolate or lanceolate. Inflorescence of 2 racemes, 4-8 cm long. Sessile spikelets 5.5-6 × 1.75-2 mm; lower glume 5-5.5 × 1.75-2 mm, oblong-lanceolate; upper glume 5-5.5 × 1.5-2 mm, boat-shaped; lower floret male; lodicules 2, each 0.75-1 × 0.3-0.4 mm, oblong or obovate, 2-horned at apex; stamens 3, anthers 1.5-2 mm long, filaments short; upper floret bisexual; ovary ca. 0.5 × 0.25 mm, oblong, styles 1.5-2 mm long, slender, stigmas 0.75-1 mm, long, feathery.

Flowering & fruiting: July-January

Native range: South and Southeast Asia

Distribution: Widespread in the tropics and subtropics

Occurrence in Maldives: Fairly common in mangroves habitats in a few southern islands

Uses: The plant is used as a fodder and soil binder.



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Ixora coccinea L.



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Synonyms: *Ixora bandhuca* Roxb., *Pavetta incarnata* Blume

Family: Rubiaceae

Local name (Dhivehi): Kudhiraiy maa

English names: Jungle flame Ixora, Needle flower, Sacred Ixora

Description: Bushy shrubs, spreading by root sprouts. Leaves simple, opposite, 6-10×2.5-3 cm, elliptic to oblong, shortly acute at apex, round to slightly cordate at base, sessile, greenish on drying. Corymbs 5-8 cm across; peduncle and pedicels short. Calyx tube 0.18-0.2 cm long, puberulous without; lobes minute. Corolla scarlet; tube 3-3.5 cm long, puberulous without; lobes 0.8-1×0.4-0.5 cm. Stamens attached at throat; anthers 0.3-0.35 cm long. Ovary 0.1-0.2 cm across; style 3-3.5 cm long, exserted. Berry 0.6-0.8 cm diam., didymous; seeds 2, globose, 0.3-0.4 cm diam.

Flowering & fruiting: Throughout the year

Native range: South India and Sri Lanka

Distribution: Widely cultivated in Indo-Malaysia and South Florida (USA)

Occurrence in Maldives: Common in homesteads as well as in natural habitats

Uses: An ornamental plant. The plant possesses antioxidative, antibacterial, hepatoprotective, anti-diarrheal and anti-neoplastic properties. The roots are useful in cough, fever, gonorrhoea, anorexia, diarrhoea, dysentery, sores, chronic ulcers and skin diseases. The flowers are a remedy for dysentery, dysmenorrhoea, leucorrhoea, haemoptysis, ophthalmopathy, sores and ulcers.



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Jasminum bignoniaceum Wall. & G. Don



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Synonym: *Jasminum revolutum* var. *peninsulare* DC.

Family: Oleaceae

Local name (Dhivehi): Huvan'dhumaa

English name: Trumpet jasmine

Description: Woody scandent subshrubs; branchlets shallowly angled from the base of 2 leaves above. Leaves alternate, odd-pinnate, glabrous; petiole to 3 cm; leaflets 4 or 5 pairs, elliptic, to 1.5 × 0.8 cm, base attenuate, recurved, apex acute, more or less sessile; petiolule of terminal leaflets 6 mm. Cymes leaf-opposed, subumbellate, to 5-flowered; peduncle to 2.5 cm. Flowers nodding; pedicels 1.5 cm; bracts linear. Calyx-tube 3 mm; lobes 5, triangular, 1.5 mm. Corolla yellow, 1 cm wide; tube 2 cm; lobes 5, ovate, over-lapping at base, recurved. Stamens 2. Berry paired, subglobose, 8 mm, black when ripe.

Flowering & fruiting: July – November

Native range: India and Sri Lanka

Distribution: Pantropical

Occurrence in Maldives: Grown as a garden plant

Uses: No known uses



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Kigelia africana (Lam.) Benth.



Synonyms: *Bignonia africana* Lam., *Crescentia pinnata* Jacq.

Family: Bignoniaceae

Local name (Dhivehi): Kunahagaali

English names: Sausage tree, Cucumber tree

Description: Small trees, branches spreading. Leaves imparipinnate, opposite or three at a node, clustered towards the apex of branchlets; rachis 14-30 cm long, stout, swollen at the base; leaflets 5-9, opposite; lamina 6-16×3-7 cm, obovate or oblong, base obliquely acute, round or cordate, apex obtuse and mucronate. Flowers bisexual, in 20-40 cm long axillary pendulous panicles. Calyx 3×1.5 cm, campanulate, 2-lipped; corolla 6 cm across, dark purple with yellow stripes, campanulate; lobes 5.

Stamens 4. Ovary superior, 1 cm, style 10 cm long; stigma broadly ovate. Fruit 30-45 × 8-15 cm, muddy brown, heavy, oblong-cylindrical, sausage-shaped, scurfy flakes present, indehiscent; seeds in fibrous pulp in the fruit, hard, obovoid, 1×0.7 cm

Flowering & fruiting: Throughout the year

Native range: Tropical and Southern Africa

Distribution: Widely planted in the tropics

Occurrence in Maldives: Planted in office premises and homesteads as an ornamental tree

Uses: The wood is moderately hard. Roots yield a bright yellow dye. Fresh fruits are used to deal with ulcers, sores and syphilis. The bark and fruits have antimicrobial properties and used in cosmetics. Both ripe and unripe fruits are poisonous to humans.

Kyllinga nemoralis (J. R & G. Forst.) Dandy ex Hutch. & Dalz.



Synonyms: *Thryocephalon nemoralis* J. R & G. Forst., *Cyperus kyllinga* f. *subtriceps* (Kunth) Kuk.

Family: Cyperaceae

Local name (Dhivehi): Kanhui

English name: White head spikesedge

Description: Erect, rhizomatous perennial herbs; rhizome long-creeping covered with brown scales; culms triquetrous. Leaves many, 2-15 × 0.2-0.4 cm, linear, margins scabrid on the upper part; sheaths 1-3 cm long, purple-brown. Inflorescence a head of globose spikes, the central spike longer than the others, white; leafy bracts 3-4, exceeding the inflorescence, the lowest upto 14 cm long. Spikelets many, 2.5-3 × 1-1.5 mm, ovate-elliptic. Glumes distichous, 2-2.5 mm long, boat-shaped, keeled, lower 2 glumes smaller, empty. Stamens 3. Stigmas 2. Nut 1-1.5 mm long, obovate or oblong, biconvex, brownish.

Flowering & fruiting: March – October

Native range: Asia-Pacific region, Liberia, Madagascar, Nigeria and Tanzania

Distribution: Pantropical

Occurrence in Maldives: Common in open lands, especially in marshy areas.

Uses: Stolon of the plant are useful in treating hyperdipsia, fever, cough, diarrhea, strangury, stomachalgia, fistula, verminosis, diabetes, colonopathy, tumour, bronchitis, hepatopathy, splenopathy and dermatitis. The plant has antioxidant and antibacterial properties.



Lannea coromandelica (Houtt.) Merr.



Synonyms: *Dialium coromandelicum* Houtt.,
Odina wodier Roxb.

Family: Anacardiaceae

Local name (Dhivehi): Bulha

English names: Wodier, Jhingam

Description: Deciduous trees, to 25 m high, bark surface grey to dark brown, rough, exfoliating in small irregular flakes, fibrous; exudation gummy, red. Leaves imparipinnate, alternate, clustered at the end of branchlets, 21-27 cm long; leaflets 7-11, opposite; 5-12 × 3-8 cm, oblong, oblong-ovate, oblong-lanceolate or ovate, base oblique, lower surface pubescent, lateral nerves 10-16 pairs. Flowers unisexual, 8 mm across, yellowish-green in compound racemes. Calyx 4-lobed; lobes ovate, persistent. Petals 4, lanceolate, reflexed. Stamens 8, inserted below the disc, filaments unequal. Fruit a drupe, 12 mm long, ovoid, red; stone hard; seed compressed.

Flowering & fruiting: January – May

Native range: Southeast Asia

Distribution: Indo-Malaysia and China

Occurrence in Maldives: Occasional in natural habitats

Uses: The wood is moderately hard and is used in small scale constructions. Bark is used as a remedy for cuts, wounds, bruises and ulcerative inflammations of the oral mucosa. Gum exuded from the cut bark is used for treating asthma.



Lantana camara L.



Synonym: *Lantana urdulata* Raf.

Family: Verbenaceae

Local name (Dhivehi): Kashikothan

English names: Sleeper weed, Wild sage

Description: Gregarious straggling shrubs; stem 4-angled, armed with short thorns. Leaves 3-6 × 2-4 cm, ovate or elliptic-ovate, base subcordate or truncate, margin crenate-serrate, apex acute to shortly acuminate, scabrous above, puberulous below; petiole to 1.5 cm long. Inflorescence terminal and axillary condensed spikes; peduncle 3-4 cm long, shortly prickly. Flowers sessile with wide range of colour variations. Calyx truncate. Corolla salver-shaped; tube 0.8-1 cm long, slender; lobes 5. Stamens 4, included. Ovary 2-celled; stigma subcapitate. Drupe 2-3 mm across, globose, purple on ripening.

Flowering & fruiting: Throughout the year.

Native Range: Tropical America

Distribution: Widely naturalised in the tropics and subtropics.

Occurrence in Maldives: Grown as a garden plant; getting established in natural habitats.

Uses: Garden plant. The leaf juice is used as an insect repellent.

Threat & damage: The species poses serious threat in most of the tropical ecosystems. *Lantana* spreads through seeds and vegetative means. Birds and other small animals consume and pass the seed in their droppings spreading it far and wide. Mature plants can produce up to 12,000 seeds annually. Seeds remain viable for several years under natural conditions.

Management: Up-rooting or continuous weeding is suitable in small infestations. Glyphosate is effective as an overall foliar spray. Fungal pathogens like *Prospodium tuberculatum* and *Puccinia lantanae* have been identified as potential biocontrol agents.



Launaea sarmentosa (Willd.) Sch. Bip. ex Kuntze



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Synonyms: *Lactuca sarmentosa* (Willd.) DC.,
Launaea bellidifolia Cass.

Family: Asteraceae / Compositae

Local name (Dhivehi): Kulhafila

English name: Beach launaea

Description: Herbs, biennial or perennial; stems procumbent, slender. Leaves pinnatifid, runcinate-pinnatifid or sinuate-toothed or lobed, 2-7 × 0.4-1.2 cm. Flowering branches long, slender, arching from node and rooting at nodes. Heads 0.8-1.2 × 0.3-0.4 cm, usually at the nodes, often clustered; peduncle slender, bracteate. Involucral bracts in 2 to 3 series, outer ovate, ovate-lanceolate or ovate-oblong, 1-2 × 3-5 mm; inner linear or linear-lanceolate or linear-oblong, 12-14 × 1-2 mm. Ligules yellow. Anthers yellowish. Achenes pale, 4-6 mm long, columnar, thickly ribbed. Pappus yellowish-white, 6-7 mm long, deciduous, slender.

Flowering & fruiting: July – September

Native range: Coastal areas in Africa, South and Southeast Asia

Distribution: Coastal areas in Africa, Asia and Australia

Occurrence in Maldives: Very common along the seashore and nearby areas of most islands

Uses: A dietary plant in Maldives and used to prepare certain dishes. Root is diuretic and is an ingredient a popular medicine taken by mothers after childbirth. The plant is anti-rheumatic and a galactagogue, the juice is used as a soporific for children.



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Lawsonia inermis L.



Synonyms: *Casearia multiflora* Spreng., *Lawsonia spinosa* L.

Family: Lythraceae

Local name (Dhivehi): Heenaa

English names: Henna plant, Egyptian privet, Samphire

Description: Woody shrubs; bark ashy grey or brown, smooth, branchlets ending in spines. Leaves 2.5-4.5×1-2 cm, elliptic or oblong to oblanceolate, base attenuate, apex acute or rounded, subsessile. Flowers fragrant in terminal cymose panicles; pedicels 2-4 mm long. Calyx tube ca. 2 mm long, cupular; lobes 4, 2-3 mm long. Petals 4, creamy white, 3-4 mm long, orbicular or obovate. Stamens 8; filaments 4-5 mm long, inflexed in bud. Ovary globose, 4-celled. Fruit purplish green, 4-6×5-7 mm, globose, dehiscent irregularly; seeds ca. 2.5 mm long.

Flowering & fruiting: December – May

Native range: The Middle East, North Africa and the Indian subcontinent

Distribution: China, Australia, The West Indies and in its native range

Occurrence in Maldives: Widely planted in homesteads

Uses: The plant is a well-known hair tonic, also widely used for skin care and hepatoprotection. The roots are diuretic, refrigerant and bitter, used in traditional medicine to treat skin diseases and premature greying of hair. The leaves are used as a remedy for wounds, ulcers, burning sensation, lumbago, inflammations, scabies, boils, haemorrhages, fever, anaemia diarrhea and jaundice.



Leucaena leucocephala (Lam.) de Wit



Synonyms: *Mimosa leucocephala* Lam., *Acacia glauca* (L.) Willd.

Family: Fabaceae - Mimosoideae

Local name (Dhivehi): Ipil ipil

English names: Subaul, Lead tree, *Leucaena*

Description: Trees, to 15 m high; branchlets puberulous. Leaves bi-pinnate, alternate; rachis 12-22 cm, slender, pulvinate, puberulent; pinnae 4-6 pairs, 4-15 cm, even pinnate, a gland between the lowest pair or a little lower down on the petiole on the upper side; leaflets 16-40, opposite, 0.8-2× 0.2-0.6 cm, obliquely oblong or obliquely-lanceolate, base obliquely truncate, apex acute or acuminate, pubescent and glaucous beneath. Flowers greenish-white, in axillary umbels, globose, to 1.2 cm across, solitary or 2-3 together; peduncle to 4 cm. Calyx 3 mm, 5-toothed. Petals 5, free. Stamens 10; filaments 7 mm long. Fruit a pod, 18-20× 1.5-2.5 cm, linear-oblong, flat, dehiscent; seeds 15-20, brown, glossy.

Flowering & fruiting: November – April

Native range: Mexico and Central America

Distribution: Pantropical

Occurrence in Maldives: Very common with profuse regeneration in almost all the islands

Uses: One of the best palatable fodder trees although mimosine toxicity is a disadvantage. The timber is of moderate quality, but makes excellent charcoal. *Leucaena* is sometimes used as a shade over coffee and cocoa. The seeds are used to expel intestinal worms and as a remedy for diabetes. The roasted seeds help to increase menstrual flow.

Threat & damage: The plant can form dense thickets eliminating native plants and cover large areas within a short duration. It can affect the biodiversity and disturb the ecological equilibrium of the invaded areas.

Management: Uprooting of saplings is effective. Removal of trees by cutting may not be useful because of aggressive sprouting from the cut ends. Herbicidal application using the cut-stump method will give some control. Biocontrol by a bruchid beetle seed predator viz., *Acanthoscelides macropthalmus* has been attempted successfully in South Africa.

Ludwigia hyssopifolia (G. Don) Exell



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Synonyms: *Jussiaea hyssopifolia* G. Don, *Jussiaea linifolia* Vahl

Family: Onagraceae

Local name (Dhivehi): Karanfoo

English name: Water primrose

Description: Herbs; branchlets angled or winged. Leaves simple, 2.5-5×1-2 cm, elliptic-lanceolate, apex gradually acute to acuminate, base cuneate, glabrous, membranous; petiole to 1 cm long. Flowers solitary, axillary. Calyx tube narrow; lobes 4, ca. 3 mm long, lanceolate, persistent. Petals 4, obovate, yellow. Stamens 8; filaments unequal. Ovary 4-celled; ovules many; stigma 4-lobed. Capsule ca. 2 cm long, linear, terete, 8-ribbed; seeds dimorphic, uniseriate and embedded in endocarp below and pluriseriate and free above.

Flowering & fruiting: August - December

Native range: Unknown

Distribution: Pantropical

Occurrence in Maldives: Common in marshy areas

Uses: The plant is astringent, carminative, diuretic and anthelmintic and is useful in diarrhea and dysentery. The plant extract has moderate anti-tumour and antibacterial properties.

Threat & damage: An aggressive weed in rice fields and wetlands in several countries in the Asia-Pacific region and in Nigeria, Trinidad and Colombia.



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Luffa cylindrica (L.) M. Roem.



Synonyms: *Momordica cylindrica* L., *Luffa aegyptiaca* Mill.

Family: Cucurbitaceae

Local name (Dhivehi): Thora

English names: Smooth loofah, Sponge gourd

Description: Climbing herbs, tendrils 3-fid. Leaves 5-7 lobed, 6-12×6-11 cm, orbicular or broadly ovate, base cordate, margin shallowly dentate, apex acuminate, upper surface glandular-punctate, lower surface scabrid; petiole to 4.5 cm long. Flowers monoecious, male and female on same axil. Male flowers in racemes, clustered; peduncle to 9 cm; pedicel to 8 mm; calyx tube broadly campanulate, lobes 5, 2-3×1-1.5 cm, lanceolate-acuminate;

petals 5, yellow; stamens 5, free, inserted near mouth of calyx tube. Female flowers solitary, co-axillary with male flower; ovary oblong. Fruits 10-22×6-8 cm, cylindrical, fibrous within; seeds many, ca. 10 × 8 mm, ovoid, compressed, black.

Flowering & fruiting: February - December

Native range: South and Southeast Asia

Distribution: Paleotropics

Occurrence in Maldives: Cultivated in homesteads

Uses: The leaves are used in haemorrhoids, splenitis, leprosy and ringworm. Tender fruits is used as vegetable. Dried and processed mature fruits used as a sponge or fibre.

Lumnitzera racemosa Willd.



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Synonyms: *Petaloma alba* Blanco, *Problastes cuneifolia* Reinw.

Family: Combretaceae

Local name (Dhivehi): Burevi

English name: Black mangrove

Description: Large shrubs to small trees; base occasionally buttressed with numerous looping simple, curved roots, intermediate between pneumatophores and knee roots. Leaves simple, alternate, 4-10 × 2-5 cm, clustered towards the apex of branchlets, obovate or oblanceolate, entire or minutely crenate. Inflorescence lax, axillary, many flowered spikes; peduncle to 10 cm long. Flowers 10-13 mm long, white; bracteoles 2, adnate to the base or sometimes one bracteole adnate to the top of the calyx tube. Calyx tube smooth, enclosing the ovary, lobes 5, persistent. Petals 5, free, alternating with the calyx lobes, oblong, acute. Stamens 10 in two whorls, inner whorl alternating with petals, outer whorl opposite to the petals.

Fruit ellipsoid, 1-1.4 × 0.3-0.5 cm, laterally compressed, crowned with persistent calyx lobes, 1-seeded.

Flowering & fruiting: July - November

Native range: South Asia, Australasia, East Africa and the Middle East

Distribution: Paleotropics

Occurrence in Maldives: Restricted to some islands; patchy growth in specific micro-habitats.

Uses: Stem exudates mixed with coconut oil is used as an anti-herpetic and to cure itching. The wood is used for small scale construction and carpentry. The bark is used for tanning.



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Mangifera indica L.



Synonym: *Mangifera austroyunnanensis* Hu

Family: Anacardiaceae

Local names (Dhivehi): Anbu, Aavi anbu, Koi anbu

English names: Mango tree, Cuckoo's joy

Description: Evergreen trees, to 30 m high, bark dark grey, rough with vertical fissures; exudation yellowish, gummy. Leaves simple, alternate, clustered at the apex of branchlets, 9-40 × 2.5-8 cm, elliptic, elliptic-lanceolate, linear-oblong, base attenuate or acute, apex acuminate, acute, coriaceous; lateral nerves 14-28 pairs; petiole 10-75 mm long, pulvinate. Flowers polygamous, yellowish-green, in terminal panicles; pedicels jointed; bract deciduous. Calyx 4-5 partite, ovate. Petals 4-5, oblong-obovate, subequal. Stamens 4-5, inserted inside or on the disc, fertile stamens 1 or 2. Fruit a drupe, 5-15 cm long, oblong-reniform, yellowish-red to

greenish-yellow, mesocarp fleshy, endocarp fibrous; seed subreniform.

Flowering & fruiting: January - May

Native range: Southern Asia

Distribution: Pantropical - widely cultivated

Occurrence in Maldives: Very commonly cultivated in homesteads

Uses: A multipurpose tree widely planted for its delicious fruit. Tender as well as ripe fruits are of high value. The fruits are a good source of carbohydrates, minerals and vitamins. The wood is used for making dug-out boats, building construction etc. Ripe mango is recommended as a laxative, diuretic and restorative tonic. The leaves are chewed to give tone to the gums. The flowers and seed kernel are useful in hemoptysis, wounds, ulcers, anorexia, dyspepsia, uro-edema, gleet, diarrhea, chronic dysentery and anemia.

Manihot esculenta Crantz.



Synonyms: *Jatropha manihot* (L.) Kunth, *Manihot utilissima* Phol.

Family: Euphorbiaceae

Local name (Dhivehi): Dhandi aluvi

English names: Topioca plant, Cassava, Manioc

Description: Shrubs, stem with prominent leaf scar. Leaves palmately lobed, lobes 7-18 × 2.6-5.5 cm, oblanceolate, base cuneate,

apex shortly acuminate; petiole 12-23 cm long, light greenish to red. Inflorescence lax, with 3-5 together in fascicles. Male flowers: perianth divided to halfway or more, greenish-white with reddish-white bands inside; anthers yellow; disc yellow to light orange. Female flowers: perianth green with red margin and midrib; disc pink; ovary with 6 longitudinal ridges. Capsule ca. 2.5 cm across, subglobose, 3-winged when young, smooth later. Seeds up to 12 mm long.

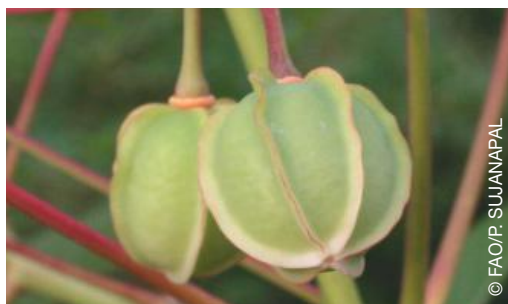
Flowering & fruiting: December - March

Native range: South America

Distribution: Widely cultivated in the tropics and subtropics

Occurrence in Maldives: Cultivated in homesteads

Uses: The plant is grown primarily for its edible tubers. The tuberous roots are useful in anorexia, dyspepsia, constipation, wounds, foul ulcers and general debility.



Manilkara zapota (L.) P. Royen



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Synonyms: *Manilkara acbras* (Mill.) Fosberg, *Achras zapota* L.

Family: Sapotaceae

Local name (Dhivehi): Sabudheli

English names: Chiku, Naseberry, Sapota, Sapodilla

Description: Trees, to 15 m high, young parts covered with brown hairs; exudation milky. Leaves simple, alternate, clustered towards the apex of branchlets, 7-15.5 × 2.5-4.5 cm, elliptic, or elliptic-oblongate, base acute or attenuate, apex slightly acuminate with retuse tip; lateral nerves many, parallel; petiole 10-30 mm long, stout. Flowers white, solitary or in pairs from the axils of upper leaves; pedicels 0.8-2 cm long, scurfy. Sepals 6, 3+3; 6.5-10 mm long. Corolla 0.7-1.1 cm long, campanulate, greenish-white; lobes 6, irregularly 2-3 toothed. Stamens 6, filaments free or partly fused with staminodes; staminodes 6, bifid, lacinate. Fruit a berry, 3.5-8 × 3-6 cm, ovoid or ellipsoid, scaly; seeds 1.5-2.5 cm long, many, black.

Flowering & fruiting: February - June

Native range: North-Eastern Guatemala

Distribution: Widely cultivated in the tropics

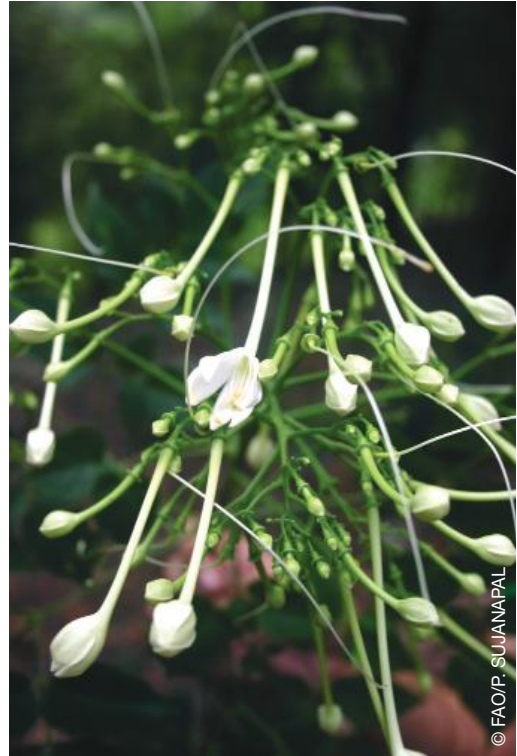
Occurrence in Maldives: Cultivated in homesteads

Uses: Cultivated for its edible and nutritious fruit. The wood is of moderate quality and is used in small scale constructions. An infusion of the young fruit and the flower is drunk to relieve pulmonary complaints. A decoction of old, yellowed leaves is a remedy for coughs, colds and diarrhea. A paste of the seeds is applied on stings and bites from venomous animals.



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Millingtonia hortensis L. f.



Synonyms: *Bignonia hortensis* (L.f.) Oken, *Bignonia suberosa* Roxb.

Family: Bignoniaceae

Local name (Dhivehi): Fonimaa

English names: Indian cork tree, Tree jasmine

Description: Trees, to 20 m high; bark pale brown, corky. Leaves 2-3 pinnate, opposite; pinnae 11-17 pairs, 6-16 cm, slender, grooved above, opposite, imparipinnate; leaflets 3-5, opposite; petiolule 5-10 mm long, slender, grooved above; lamina 2.5-8 × 1.5-5 cm, ovate or elliptic-ovate, base oblique, truncate or acute, apex acuminate, margin entire or coarsely dentate-crenate; lateral nerves 3-5 pairs, prominent; rachis 45-70 cm long, swollen at base, grooved above. Flowers white, in terminal corymbose panicles. Calyx 4 mm, cupular, puberulous; lobes 5. Corolla 2.5

cm across; tube narrow, cylindrical, ca. 7 cm; lobes 5, subequal. Stamens 4, didynamous, filaments 1-1.5 cm long; anthers oblong, 1-cell fertile, other reduced to an appendage. Fruit an elongated capsule, to 30×2 cm, 2-valved; seeds many, winged.

Flowering & fruiting: March – August

Native range: Southeast Asia

Distribution: Southeast Asia and Malaysia

Occurrence in Maldives: Planted as an avenue tree in some islands

Uses: The wood is soft and the bark is used as an inferior substitute for cork. The pleasant smelling flowers are used in the treatment of asthma and sinusitis. Leaves, roots and bark are anti-asthmatic and antimicrobial. The tree has antioxidant, larvicidal, antimutagenic, anthelmintic and hepatoprotective properties.

Mimosa pudica L.



Synonym: *Mimosa hispidula* Kunth

Family: Fabaceae - Mimosoideae

Local name (Dhivehi): Ladhugas

English names: Sensitive plant, Humble plant, Touch-me-not

Description: Straggling herbs; stem 4-angular, armed with black tipped prickles. Leaves alternate, to 12 cm long, pinnate; pinnae 5-10 pairs; leaflets ca. 20 pairs, oblong, 3-7×0.75-1 mm, overlapping, apex acute-mucronate, base oblique-truncate; rachis, tomentose. Flowers pink on pedunculate head, to 3.5 cm across. Lomentum flat, margin with recurved prickles; seeds 3-5, subrhombic.

Flowering & fruiting: July – January

Native range: Tropical America

Distribution: Pantropical, naturalized in most of the non-native areas

Occurrence in Maldives: Occasional in open areas

Uses: The roots are useful in leucoderma, vaginopathy, dysentery, jaundice, asthma, fistula, smallpox, spasmodic affections, ulcers and fevers. The root extract can neutralize the lethal affect of snake venom. The leaves are used to treat hydrocele, conjunctivitis, cuts and wounds and haemorrhages. The whole plant is used internally for vesical calculi and externally for oedema, rheumatism, myalgia and tumour of the uterus.

Threat & damage: *Mimosa pudica* can form monotypic ground covers and suppress growth of native species and agricultural crops. The roots produce carbon disulphide which inhibits microbial colonization in the rhizosphere.

Management: Intensive grazing can keep growth of mimosa under check. Use of common herbicides is also found effective in managing the weed. Coir dust can be used as mulch in agricultural areas to suppress its growth.

Mimusops elengi L.



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Synonym: *Mimusops lucida* Poir.

Family: Sapotaceae

Local name (Dhivehi): Moonimaa

English names: Bullet wood, Bakul tree

Description: Evergreen trees, to 20 m high, bark dark grey, cracked or fissured longitudinally, rough; exudation white. Leaves simple, alternate, 4-12 × 3.5-7.5 cm; elliptic or elliptic-oblong, base round or obtuse, apex obtuse to acuminate; lateral nerves many, parallel, looped near the margin; petiole 15-40 mm long. Flowers white, fragrant, 1-3, in axillary fascicles, pedicel 1 cm long. Calyx lobes 8 in 2 series of 4 each. Corolla 1 cm across; lobes 24, 3 series of 8 each. Stamens 8, alternating with pilose staminodes. Fruit a berry, yellow or orange-yellow, ovoid, 2.5 × 1.5 cm, fleshy; seeds usually 1, oblong-ellipsoid, laterally compressed, smooth, shining.

Flowering & fruiting: December - August

Native range: India

Distribution: Indo-Malaysia

Occurrence in Maldives: Widely planted as an avenue tree

Uses: The flowers are sweet-scented and used to make garlands. The wood is extremely hard and deep red in colour. Water boiled with the bark is used as a gargle for the diseases of teeth and inflammation of gums. The bark, flowers and fruits are acrid, astringent, cooling and anthelmintic. Tender stems are used as tooth brushes. Flowers are used to prepare a lotion for wounds and ulcers.



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Mirabilis jalapa L.



Synonym: *Mirabilis lindheimeri* (Standl.) Shinnars

Family: Nyctaginaceae

Local name (Dhivehi): Asarumma

English name: Four o'clock plant

Description: Herbs with large tuberous roots; stem semisucculent. Leaves opposite, 3-9 × 2.5-5 cm, triangular-ovate, base obliquely truncate to shortly decurrent, apex acute to acuminate; lateral nerves 5-7 pairs; petiole to 3.5 cm long. Inflorescence of 3-7-flowered, terminal capitate cluster. Perianth pink, white or yellow, funnel-shaped; tube to 4 cm long, slender, limb 5-lobed. Stamens 3-6, exserted. Ovary globose, sessile; stigma shortly lobed or fimbriate. Anthocarp 4-6 mm across, globose, rugose, black when ripe.

Flowering & fruiting: August - April

Native range: Tropical America

Distribution: Throughout the tropics

Occurrence in Maldives: Grown as an ornamental plant

Uses: The root of the plant is a mild purgative. Bruised and heated leaves are applied as a stimulating poultice to boils, buboes and other abscesses to hasten the suppurative process. It also cures wounds and bruises.



Morinda citrifolia L.



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Synonyms: *Morinda angustifolia* Roth, *Morinda tinctoria* Noronha

Family: Rubiaceae

Local names (Dhivehi): Ahi, Ehi

English names: Great Morinda, Indian mulberry

Description: Small crooked evergreen trees, to 8 m high; bark shallowly fissured; branchlets quadrangular. Leaves simple, opposite, 12-50 × 5-17 cm, elliptic-lanceolate, base cuneate; stipules variable in size and shape, broadly triangular. Flowers bisexual, fragrant, in dense globose heads, connate by the calyces, peduncle opposite to normally developed leaves. Calyx tube hemispheric, limb truncate. Corolla funnel-shaped, lobes 5 lanceolate, acute. Stamens 5, inserted on the mouth of the corolla. Filaments hairy. Fruit an ovoid syncarp of pyramidal, 2-seeded drupes, 3-10 × 2-3 cm, yellow-white; seeds black, with hard albumen and distinct air chamber.

Flowering & fruiting: July – January

Native range: Southeast Asia and Australia

Distribution: Indo-Malaysia to Australia

Occurrence in Maldives: Very common in coastal habitats

Uses: The green fruit, leaves and roots were traditionally used in Polynesia to treat menstrual cramps, bowel irregularities, diabetes, liver diseases and urinary tract infections. Processed fruit juice is marketed under the trade name Noni, a multipurpose rejuvenating tonic claimed to boost immune, circulatory and digestive systems.



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Moringa oleifera Lam.



Synonym: *Moringa moringa* (L.) Millsp.

Family: Moringaceae

Local name (Dhivehi): Muranga gas

English names: Ben oil tree, Drumstick tree, Horseradish tree

Description: Small deciduous trees; bark grayish or whitish, corky. Leaves 2–4-pinnate, to 22–50 cm, tomentose, pinnae and pinnules opposite, rachis thickened and articulated at base; leaflets to 2 × 1 cm, oblong, obtuse at apex, pubescent; petiolute to 1 mm. Panicles axillary, tomentose; flowers white, pedicels to 1.5 cm. Calyx lobes 1.5 cm, oblong, reflexed, pubescent outside. Petals 1.5 × 0.5 cm, spatulate, unequal. Fertile stamens 5, filaments 1 cm; anthers one celled, intervened by 5 or 7 staminodes. Capsules to 25–60 cm, 9-ribbed; seeds winged.

Flowering & fruiting: November – March

Native range: India

Distribution: Cultivated throughout the tropical countries

Occurrence in Maldives: Very common in home gardens.

Uses: Fruits and leaves are nutritious. The leaves are rich in vitamins A and C and are a remedy for scurvy. Moringa is used against anaemia, arthritis, joint pain, asthma, constipation, diabetes, diarrhea, stomach pain, ulcers, intestinal spasms, high blood pressure, thyroid disorders and microbial infections. It is also used to reduce swelling, increase sex drive, prevent pregnancy, boost the immune system, and increase breast milk production. Oil from the seeds is used in food, perfume and hair care products.



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Muntingia calabura L.



Synonym: *Muntingia rosea* H. Karst.

Family: Elaeocarpaceae

Local name (Dhivehi): Jeymu

English names: Bird's cherry, Cotton candy berry, Jam tree

Description: Evergreen trees, to 7 m high; branches spreading; branchlets densely tomentose, glandular-pubescent. Leaves simple, alternate, 6-11 × 2-4 cm, lanceolate or oblong-lanceolate, base obliquely subcordate, apex acuminate, margin serrate, tomentose; lateral nerves 3-5 pairs; petiole 5 mm long. Flowers 1.5-2.5 cm across, white, rarely pink; pedicels 2-2.5 cm long. Sepals 5, 1.5 cm long, lanceolate, valvate, shortly connate at base, densely pubescent. Petals 5, thin, ovate, obovate or suborbicular, shortly clawed. Stamens many, ca. 1 cm long; filaments filiform. Fruit a berry, 1-1.5 cm across, red or yellow, subglobular; seeds many, obovoid-ellipsoid.

Flowering & fruiting: Throughout the year

Native range: Southern Mexico, tropical America, the Greater Antilles, St. Vincent Inland and Trinidad

Distribution: Widely introduced in the tropics.

Occurrence in Maldives: Very common as an avenue tree. Also, naturalised in many islands

Uses: Wood is fine-grained, moderately strong and light in weight and used in general carpentry. Fruits are edible and can be cooked in pies or made into preserves. The leaves make a flavourful tea when steeped in hot water. The flowers are known to possess antiseptic properties. An infusion of the flower is valued as an antispasmodic which is taken to relieve headache and cold.



Murraya koenigii (L.) Spreng.



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Synonyms: *Bergera koenigii* L., *Chalcas koenigii* (L.) Kurz

Family: Rutaceae

Local names (Dhivehi): Hikandhi gas, Hikandhi faiy

English names: Curry leaf tree, Curry bush

Description: Shrubs or small trees. Leaves pinnate, crowded at apex of branchlets; leaflets 15-25, asymmetrical, oblique, 1.5-4 × 0.8-2 cm, oblong-lanceolate, apex acute, margin entire. Panicles terminal, corymbose, many-flowered. Flowers small, white; pedicels ca. 3 mm long. Sepals ca. 1 × 1 mm. Petals 5, white, 6-8 × 1.5 mm, linear, sparsely glandular, rounded and slightly recurved at apex. Stamens 10, 5 longer than the others. Ovary globose; stigma capitate. Berry 8-11 mm across, subglobose, purplish-black when ripe; seeds 1-2, green, globular-ovoid.

Flowering & fruiting: March – July

Native range: India and Sri Lanka

Distribution: Indo-Malaysia and China

Occurrence in Maldives: Widely planted in home gardens

Uses: Widely used for culinary and flavouring purposes. The root, bark and leaves are bitter, acrid, cooling, demulcent, febrifuge, stomachic, carminative, anodyne, anti-inflammatory, antiseptic and tonic. They are also used to treat hyperdipsia, burning sensation, skin diseases, anorexia, helminthiasis, dyspepsia, flatulence and colic. A decoction of leaves and petiole is given against rheumatism, leprosy, piles, diarrhea and fever.



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Nephrolepis hirsutula (G. Forst.) C. Presl



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Synonym: *Polypodium hirsutulum* G. Forst.

Family: Nephrolepidaceae

Local names (Dhivehi): Keesfilaa, Handifilaa, Handifangivah

English names: Scaly sword fern, Asian sword fern

Description: Erect herbs, stolon creeping, densely scaly; scales lanceolate with marginal cilia. Fronds to 1.2 m long. Pinnae closely spaced, usually with an elongate narrowly triangular basal auricle. Sterile pinnae 2-11 × 10-20, with scattered scales; upper midrib covered with scales or simple

hairs; margins crenate towards acute apex. Fertile pinnae 3-11 × 0.5-1.4 cm wide; margins deeply crenate. Sori submarginal; indusium reniform.

Reproductive structures: Sporophylls produced throughout the year

Native range: The tropics

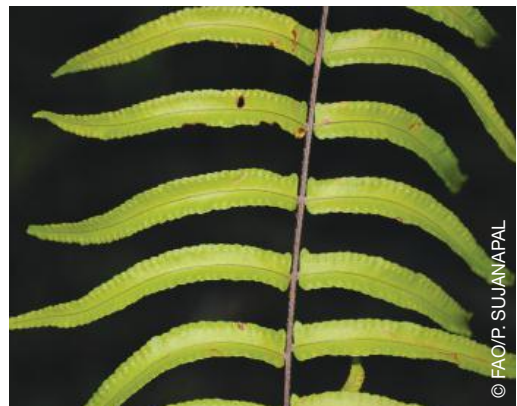
Distribution: Widespread in the tropics and subtropics

Occurrence in Maldives: Very common in marshy and sub-marshy areas

Uses: The fronds are used for decorative purposes.



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Nerium oleander L.



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Synonyms: *Nerium indicum* Mill., *Nerium odorum* Sol.

Family: Apocynaceae

Local name (Dhivehi): Kaneeru

English names: Oleander, Common oleander, Indian oleander

Description: Evergreen shrubs, stem with milky juice. Leaves 10-15×1-2 cm, linear-lanceolate, tapering at both ends, acuminate, thick coriaceous, midrib prominent, nerves numerous; petiole 5-7.5 mm long. Flowers white, pink or dark red, single or double, fragrant, 3-4 cm across, peduncle and pedicel hairy. Calyx ca. 6 mm long, divided into 5 linear, acute lobes, hairy with gland at the base inside. Corolla tube 1.8 cm long, hairy within, throat narrow, ending in five twisted petals, tips rounded, corona of 5 scales near the throat of the corolla, cleft into 4-7 linear segments. Stamen included, filament short, anthers connivent and adherent to stigma,

connectives hairy, produced upward into long thread-like hairy appendages. Ovary with two distinct carpels, style filiform; stigma two lobed. Fruit 12-20×0.7 cm long.

Flowering & fruiting: November - May

Native range: Eastern Mediterranean basin and Southeast Asia

Distribution: In the tropics. Also, cultivated elsewhere

Occurrence in Maldives: Grown as an ornamental plant.

Uses: All parts of the plant are highly toxic to humans, pets, livestock and birds due to the presence of cardiac glycosides, mainly oleandrin. Ingestion causes nausea, vomiting, cardiac arrhythmias, hypotension and death. The sap has been used as rat poison. The roots are useful in cardiac asthma, strangury, renal and vesical calculi, chronic stomachalgia, arthralgia, leprosy, pruritus and ulcers.

Nymphaea nouchali var. *caerulea* (Savigny) Verdc.



Synonym: *Nymphaea caerulea* Savigny

Family: Nymphaeaceae

Local name (Dhivehi): Nailoafaru

English name: The Sacred blue waterlily

Description: Aquatic herbs, rhizomes erect. Leaves subpeltate, suborbicular, retuse, entire or sinuate-dentate towards base, 17-25 cm across, glabrous, cleft almost near to petiole base; sinus 6-10 cm long; petioles brownish green. Flowers 7.5-16 cm across, dark sky blue, fragrant. Receptacles glabrous; pedicels similar to petioles. Sepals oblong-lanceolate, obtusely cucullate at apex, entire, ca. 6 × 2 cm, brownish green with purple streaks outside, blue with dark blue spots towards tip inside. Petals 14-20; outer ones lanceolate-elliptic, obtusely cucullate, ca. 5.5 × 1.5 cm; inner ones elliptic, acute, ca. 4.0 × 0.8 cm. Stamens 55-80, reflexed at the base of filament and anthers becoming erect

forming a wide ring around the stigma; filaments of outer stamens ca. 10 × 4 mm, yellow; anthers 6-12 mm long, blue; sterile appendages 1-4 mm long, reflexed, not prominent in inner ones, pale blue. Carpels 13-18, stigmatic surface broad, ca. 2 cm in diameter, flattened, yellow; stigmatic appendages oblong, yellow, incurved after pollination.

Flowering & fruiting: Throughout the year

Native range: North Africa

Distribution: Temperate and tropical Asia, Australia and Africa

Occurrence in Maldives: Occasional in lakes and small water bodies

Uses: Apart from its ornamental value, the rhizomes are useful in diarrhea, dysentery, dipsia and general debility. They are also eaten boiled or roasted. The seeds are useful in diarrhea and dermatopathy.

Ochrosia oppositifolia (Lam.) K. Schum



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Synonyms: *Cerbera parviflora* G. Forst.,
Cerbera oppositifolia Lam.

Family: Apocynaceae

Local name (Dhivehi): Dhunburi

English name: Cork wood tree

Description: Small to medium evergreen trees, bark pale grey with white latex. Leaves in whorls of 4, sometimes opposite, simple, obovate to elliptic, 8–35 × 3–15 cm, base decurrent, apex rounded, petiole 1–6.5 cm long. Inflorescence a terminal cyme, but often seemingly axillary, many-flowered; peduncle 2–14 cm long; lower bracts leafy, broadly ovate. Flowers bisexual, regular, 5-merous, almost sessile. Sepals connate at base, ovate, 1–2 mm long, thick. Corolla creamy to white, tube 4–10 mm long, cylindrical, slightly widened around the stamens, lobes elliptical, 5–9 × 2–3 mm, apex rounded, spreading. Ovary superior, consisting of 2 free carpels, ending in an ovoid pistil head, with a basal ring and a 2-lobed apex. Fruit of 2 free ovoid to ellipsoid drupes 5–8 × 3–5.5 cm, apex rounded or apiculate, indehiscent, mesocarp fibrous, each drupe 1–2 seeded; seeds elliptical, flattened, 1.5–2.5 cm long, winged.

Flowering & fruiting: December – October

Native range: Southeast Asia and the Pacific

Distribution: South Asia to the Western Pacific

Occurrence in Maldives: A common tree in natural habitats

Uses: The wood which is yellowish-white, is used for construction purposes. A decoction of the bark is taken to purify blood, as an appetizer, purgative and carminative. A leaf decoction is used to wash the abdomen of women after childbirth. The bark, wood and leaves are known to have febrifugal and stomachic properties.



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Ocimum tenuiflorum L.



Synonyms: *Ocimum inodorum* Burm.f., *Ocimum sanctum* L.

Family: Lamiaceae / Labiatae

Local name (Dhivehi): Fusthula

English names: Basil, Sacred basil, Holy basil

Description: Subshrubs; branchlets hirsute with reddish-purple hairs. Leaves 1.3- 3 × 0.6-2 cm, elliptic-oblong, obtuse at both ends, margin coarsely serrate, puberulous; petiole to 2 cm long, covered with reddish-purple hairs. Racemes to 11 cm long, generally simple, occasionally branched at base. Calyx purplish, ca. 3 mm long, campanulate; lobes 5, upper lip ovate, acute, lower lip hispid without. Corolla reddish-pink, to 4 mm long, tubular-campanulate; tube ca. 2 mm long, dotted with sessile oil

glands; lobes of upper lip oblong-orbicular; lower lip ovate-oblong. Stamens 4; filaments villous at the base. Nutlets ca. 1.5 mm long, ellipsoid, dark brown.

Flowering & fruiting: Throughout the year

Native range: South Asia

Distribution: Palaeotropics

Occurrence in Maldives: In homesteads

Uses: Aromatic plant grown for religious and medicinal purposes and for its essential oil. The plant is used in several forms such as a herbal tea, dried powder or fresh leaf. It is useful as a medicine in cardiopathy, leucoderma, asthma, bronchitis, catarrhal fever, otalgia, vomiting, lumbago, hiccough, ophthalmia, gastropathy in children, genito-urinary disorders, ringworm, hepatopathy, verminosis and skin diseases.

Oldenlandia auricularia (L.) K. Schum.



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Synonyms: *Hedyotis auricularia* L., *Hedyotis hirsuta* Lam.

Family: Rubiaceae

Local name (Dhivehi): Fukkahui

English name: Emmuli vina

Description: Diffuse to trailing herbs; stem 4-angled, bluish, villous when young. Leaves 2-7×1-2.5 cm, elliptic-ovate or elliptic-lanceolate, base rounded or cuneate, apex shortly acuminate; lateral nerves 4 or 5 pairs, glabrous; stipules broadly ovate, pectinate on margins. Flowers fasciated at axils; pedicels ca. 1 mm long. Calyx tube ca. 1 mm long, 4-lobed. Corolla white, campanulate; tube ca. 1 mm long; lobes 4, reflexed, hairy at throat. Stamens 4, included. Capsule ca. 2 mm across, globose, pubescent, indehiscent; seeds many, black, 3-angled.

Flowering & fruiting: October - December

Native range: Indo-Malaysia

Distribution: Indo-Malaysia to Australia

Occurrence in Maldives: Common in open areas

Uses: The plant is useful in all sorts of bowel complaints including diarrhea and dysentery. A decoction of the green leaves and roots is used for treatment of colitis.



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Oldenlandia biflora L.



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Synonym: *Hedyotis biflora* (L.) Lam.

Family: Rubiaceae

Local name (Dhivehi): Kotharu kaa vina

English name: Two-flower mille grains

Description: Branched procumbent herbs; stem 4-angled. Leaves simple, opposite, 1.2-3.5 × 0.4-1.5 cm, elliptic or ovate, base cuneate, apex acute. Inflorescence axillary or mostly terminal cymes. Calyx 4-angled; lobes short, triangular, acute. Corolla white, ca. 5 mm across, campanulate; tube ca. 2 mm long, villous at throat; lobes 4, obovate. Stamens 4. Capsule 4-angled, 3-4 × 2.5-3.5 mm, hispidulous, loculicidally dehiscent

in the upper part.

Flowering & fruiting: Throughout the year

Native range: Indo-Malaysia

Distribution: Asia-Pacific

Occurrence in Maldives: Very common in open areas

Uses: The plant is pounded and applied to wounds and also used to treat fever and gastric ulcers. A decoction made from the plant is given internally for diarrhea and dysentery. The leaves are useful in intermittent fevers, gastric irritation and depression.



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Oldenlandia trinervia Retz.



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Synonyms: *Hedyotis trinervia* (Retz.) Roem. & Schult., *Hedyotis orbiculata* Wall.

Family: Rubiaceae

Local name (Dhivehi): Emmuli hui

English name: Trinervia

Description: Annual prostrate herbs, stem acutely angular to winged, pilose. Leaves opposite, 6-12 × 6-7 mm, orbicular, broadly ovate or elliptic, acute, mucronate at apex, narrowed at base, punctate, 3-nerved below, setolose at margin, glabrous on both surfaces; petiole 0.5-1.5 mm long, broad, winged, pilose; stipules connate, with 2-3 bristles. Flowers 2-3 mm long in axillary clusters of 2-6 flowers or solitary. Hypanthium 1-1.2 mm long, globose; calyx limb very short; lobes 4, 1-1.2 × 0.3-0.4 mm, triangular to ovate-lanceolate, pilose on outer surface. Corolla tube very short; lobes 1.5-1.8 × 0.6-0.10 mm. Stamens 4, included within corolla, 0.5-1 mm long; anthers small, adherent around stigma. Ovary 0.8-1 mm long; ovules many on

globose placenta towards the base. Capsule globose, 1.5-1.8 × 1.5-1.8 mm didymous, laterally compressed, top truncate; seeds many, triangular, 0.15-0.2 × 0.1-0.13 mm, exotesta reticulate, purple.

Flowering & fruiting: November – April

Native range: Not clearly known

Distribution: China, Indonesia, Malaysia, Sri Lanka, India and North Vietnam

Occurrence in Maldives: In open areas

Uses: The leaves are roasted and eaten.



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Oldenlandia umbellata L.



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campanulate; lobes 4, lanceolate. Stamens 4, in the throat of the corolla tube, exserted; filaments linear. Ovary ca. 1 mm across, globose, hairy; stigma 2-fid, recurved. Capsule 2-2.5 mm across, globose, didymous, scabrid; seeds angular, reticulate.

Flowering & fruiting: November - March

Native range: India

Distribution: India and Sri Lanka

Occurrence in Maldives: Common in open land and farming areas

Uses: Plant decoction is used to treat bronchial asthma. A colour-fast red dye is extracted from the root bark.



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Synonyms: *Hedyotis umbellata* (L.) Lam., *Oldenlandia puberula* (G. Don) R. Br. ex Arn.

Family: Rubiaceae

Local name (Dhivehi): Kotharu kaa vina

English name: Choy root

Description: Diffuse or prostrate herbs. Leaves sessile, 0.5-1.6 × 0.2-0.4 cm, linear-lanceolate, base decurrent, margin revolute, apex acute; stipules with several bristles, base triangular. Flowers in many-flowered terminal, umbellate cymes and also sometimes axillary. Calyx lobes 4, persistent, 1.5 mm long, ovate-acuminate. Corolla pinkish-white, ca. 3 mm across,



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Pandanus amaryllifolius Roxb.



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Synonyms: *Pandanus odoratus* Ridl., *Pandanus latifolius* Hassk.

Family: Pandanaceae

Local names (Dhivehi): Raampa, Rammpe faiy

English name: Pandan leaves

Description: Palmaceous shrubs, slightly leaning or erect stem with aerial root. Leaves 25–75 × 2– 5 cm, somewhat glaucous abaxially, keeled abaxially but unarmed, margin entire except at apex, with very few minute prickles, apex with distinct twin lateral pleats. Large growth phase with leaves broadly linear 150–220 × 7–9 cm. Male inflorescence pendent, to 60 cm; spathes ca. 90 cm; spikes cylindric, to 35 cm or more, upper ones much shorter, 9–10 × 2 cm, of numerous crowded, flat staminal

phalanges 1.5–2.5 mm wide; stamens mostly 3–6 per phalange; filaments 0.5–1.5 × 0.4–0.6 mm; anthers oblong, ca. 2.5 × 0.5 mm, apex bluntly convex, without or with a barely discernible apiculum.

Flowering & fruiting: Very rare

Native range: Indonesia

Distribution: Southeast Asia

Occurrence in Maldives: Fairly common in homesteads as well as in natural forests.

Uses: The leaves are used to give a refreshing and fragrant flavour to Southeast Asian dishes. They are also used as food wrappers and as air fresheners. Oil obtained from the leaf is a stimulant and antispasmodic and is effective against headaches, rheumatism, and epilepsy.

Pandanus odorifer (Forssk.) Kuntze



Synonyms: *Keura odorifera* Forssk., *Pandanus odoratissimus* L. f.

Family: Pandanaceae

Local name (Dhivehi): Maakashikeyo

English name: Fragrant screw pine

Description: Branched, tall, woody shrubs; trunk greyish-brown, ringed by leaf-scars and with basal prop roots. Leaves spiralled in 3 rows, to 200 × 6 cm, linear-ensiform, apex gradually narrowed in to elongated triquetre flagella, margins and dorsal midrib armed with white prickles, glaucous beneath. Female inflorescence a solitary terminal cephalium, pendulous in fruit. Phalanges mostly 5-15 celled, carpels concentrically arranged, apices with U or V shaped stigmas. Male inflorescence

of several spikes, with white or cream axillant bracts, 5-10 cm long, composed of numerous phalanges; anthers apiculate. Fruit to 20 × 10 cm oblong, red-orange.

Flowering & fruiting: July – November

Native range: Indo-Malaysia

Distribution: Tropical and subtropical Asia

Occurrence in Maldives: Common in coastal habitats

Uses: A multi purpose plant. The leaves are widely used to make mats, hats, bags, paper and baskets. Fibrous roots make coarse paint brushes. The flowers are used to cure scalp and skin ailments. The spike is a remedy for rheumatic arthritis in animals. The leaves and roots are used to treat leprosy, ulcers, skin diseases, flatulence, fever and diabetes.

Pandanus tectorius Parkinson ex Du Roi



Synonyms: *Pandanus absonus* H. St. John, *Pandanus adscendens* H. St. John

Family: Pandanaceae

Local name (Dhivehi): Boa kashikeyo

English names: Tahitian screw pine, Thatch screw pine

Description: Evergreen, coarsely branched palmaceous trees with hollow stem. Prop roots are numerous, thick and originate from the base of the trunk. Exposed stems grossly ringed by leaf scars. Leaves linear, 100-200 × 4-7 cm wide, arranged spirally in three rows at the tips of the branches, leaf apex, long, flagella like; margin and midrib prickled. Dioecious; male inflorescence a raceme of spikes, flowers tiny, white, and fragrant with large showy bracts. Female inflorescence a condensed head. Fruits ovoid, ellipsoid, sub-globose or globose with tightly bunched, wedge shaped, fleshy

drupes; seed hard and stony.

Flowering & fruiting: Throughout the year

Native range: Indo-Malaysia and Australia (Queensland)

Distribution: In coastal habitats throughout the tropics.

Occurrence in Maldives: Common in natural habitats

Uses: A multipurpose tree second only to coconut. It can withstand drought, strong winds and salt spray and hence used in shoreline restoration. Fruits is one of the traditional foods in Maldives. The leaves are used to make baskets, mats, thatch roofs and grass skirts. The stem and branches are used for house construction and as firewood. A decoction of the leaf is used to treat headache, arthritis, and stomach spasms. The root decoction is believed to have aphrodisiac and cardiotonic properties.

Panicum repens L.



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Synonyms: *Panicum arenarium* Brot.,
Panicum grossarium Forssk.

Family: Poaceae/Gramineae

Local name (Dhivehi): Kudhihui

English names: Couch panicum, Torpedo grass, Victoria grass

Description: Perennial grass. Culms 30-75 cm long, rhizomatous, rooting at the lower nodes. Leaves 7-24 × 0.4-0.7 cm, linear or linear-lanceolate, base shallowly cordate, apex acuminate, distichous, glaucous, scattered-pubescent on the upper surface; sheaths to 7 cm long, ciliate along the margins; ligules membranous, with dense tuft of hairs behind. Panicles 6-18 cm long. Spikelets 2.5-3.5 mm long, oblong-lanceolate, acute; pedicels 2-5 mm long. Lower glume ca. 1 × 1.5 mm, ovate. Upper glume 2-3 × 1-1.5 mm, ovate-lanceolate. Lower floret male. Upper floret bisexual. First lemma 2-3 × 1-1.5 mm, ovate-lanceolate. Palea ca. 2.5 × 1 mm, oblong-lanceolate, hyaline, 2-keeled. Stamens 3. Second lemma 1.5-2. × 0.5-1 mm, oblong, subcoriaceous. Palea elliptic, subcoriaceous. Stamens 3. Ovary ovate; stigma ca. 1 mm long.

Flowering & fruiting: July – September

Native range: The Old World

Distribution: Widespread in the tropics and subtropics

Occurrence in Maldives: Common in open areas of marshy habitats

Uses: Widely used as a forage species. Being tolerant to salt, it is used for reclaiming saline soils. Fresh juice of the internode portion of the plant is used as an eye drop to cure eye irritation. Paste of fresh stolon mixed with black pepper is taken to cure piles.



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Paspalum scrobiculatum L.



Synonym: *Paspalum orbiculare* G. Forst.

Family: Poaceae/Gramineae

Local name (Dhivehi): Mauu-laiki

English name: Kodo millet

Description: Annual or perennial herbs; culms 15-80 cm high, tufted, erect or creeping and rooting at the lower nodes. Leaves 3.5-36 × 0.4-1 cm, lanceolate to linear, base rounded, apex acuminate; sheaths to 15 cm long; ligules membranous. Racemes usually 2, rarely 3-5, 2.5-7 cm long; rachis flat. Spikelets 2-ranked or

3-ranked, 2-3.5 mm long, ovate-orbicular or obovate, obtuse. Lower glume absent. Upper glume 2-3.5 × 2-2.5 mm, ovate or orbicular, membranous. Lower floret barren. Upper floret bisexual. First lemma 2-3.5 × 2-2.5 mm, ovate or orbicular, crustaceous; palea 2-2.5 × 1.5-2 mm, ovate or orbicular, crustaceous, inflexed. Stamens 3; anthers yellow or brown. Ovary ca. 0.5 mm long; stigmas cream yellow in colour.

Flowering & fruiting: Throughout the year

Native range: Sub-saharan Africa and partly in the Asia-Pacific

Distribution: Pantropical

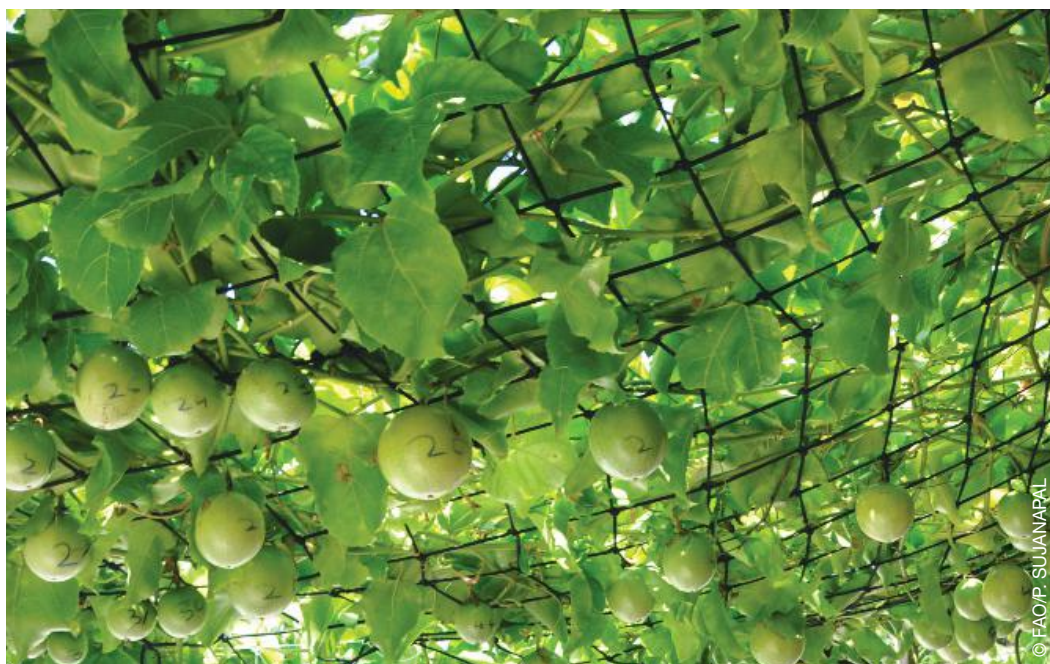
Occurrence in Maldives: Common in open areas

Uses: Livestock fodder. The leaves are antiseptic and their paste is applied externally in skin infections. The plant is also useful as a remedy for carbuncle, diabetes, intoxication, ophthalmia, parturition and sores.



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Passiflora edulis Sims



Synonyms: *Passiflora incarnata* L., *Passiflora gratissima* A St.-Hil.

Family: Passifloraceae

Local name (Dhivehi): Jumhoorimeyvaa

English names: Granadilla, Purple granadilla, Passion fruit

Description: Woody climbers. Leaves palmately 3-lobed, 9.5 × 8.2 cm, lobes oblong, apex acute or acuminate, margin serrulate, glabrous, basally 3-nerved; petiole to 1.6 cm long; stipules linear. Flowers axillary, solitary, white. Calyx lobes 5. Petals 5, inserted at the throat of calyx tube. Corona tinged violet. Stamens 5. Ovary 1-celled; ovules many; styles 3; stigma capitate. Berry ca. 4 cm across.

Flowering & fruiting: Throughout the year

Native range: Paraguay, Brazil and Argentina

Distribution: Pantropical

Occurrence in Maldives: Cultivated in homesteads

Uses: Widely cultivated for its edible fruit. The fruit lowers blood pressure. The flower can be made into a sedative and antispasmodic. It is used to treat nervous disorders, bronchial conditions, arthritis, asthma, insomnia, gastrointestinal disorders and menopausal symptoms. Carotenoids and polyphenols in the fruit are shown to kill cancer cells in vitro.



Passiflora foetida L.



Synonyms: *Dysosmia foetida* (L.) M.Roem., *Passiflora balsanae* Chodat

Family: Passifloraceae

Local name (Dhivehi): Dhaagandu Kekuri

English names: Foetid passion flower, Pop vine, Stinking passion flower

Description: Herbaceous vines; stem, petioles and leaves glandular-hispid. Leaves roughly to deeply 3-5 lobed, 5-7 × 3-5 cm, suborbicular to ovate, cordate at base, lobes acuminate, adpressed glandular-pubescent; petiole to 1.5 cm long; stipules deeply dissected to glandular appendaged. Bracts and bracteoles deeply pinnatisect, glandular-pubescent. Flowers axillary, often solitary, 3-4 cm across. Calyx lobes 5, 1-1.5 × 0.6- 0.8 cm, broadly ovate, apically spurred. Petals white, shorter than calyx lobes. Coronal segments in 2 whorls; outer coronal hairs many, 0.8-1 cm long; inner ones 2-3 mm long. Gynandrophore 5 mm long. Stamens 5. Ovary 1-celled; ovules many; styles 3; stigma capitate. Berries 1.5-2 cm diam., subglobose, yellow, subtended by the bracts; seeds many, 4-5 mm, ovate, laterally compressed, pitted.

Flowering & fruiting: July – December

Native range: Tropical America

Distribution: Naturalised widely in the tropics and subtropics

Occurrence in Maldives: Common in disturbed areas

Uses: The fruits are edible, raw or cooked. The leaves are used in baths as a remedy for skin infections. The roots have antispasmodic properties.

Threat & damage: Though the plant is reported to invade natural vegetation in a number of countries, it doesn't cause any serious impact.



Passiflora suberosa L.



Synonym: *Passiflora glabra* Mill.

Family: Passifloraceae

Local names (Dhivehi): Ranguveyo, Kulavelau

English name: Corky-stem passion flower

Description: Tendrillate climbers. Leaves simple, alternate, lobed, 4.5-8×3.5-6.5 cm, smooth; petiole 0.5-2.5 cm, usually with two globular glands to the sides; stipules linear, about 6-7 mm long, lateral veins 5 or 6. Tendrils simple, axillary. Flowers 1.5 – 2 cm diam., pedicel 13-15 mm long, articulated in the upper half. Calyx tube flat, disk-like at the apex, 5-6 mm diam. Perianth lobes 8-9 mm long. Corona in four whorls with decreasing size towards the centre. Stamens attached to gynophore, ca. 2 mm long. Styles 3, free, curved, stigma clavate. Fruit globular to ellipsoid, 10-12×10-11 mm; seeds numerous, flattened, obovoid or tear-drop shaped in outline, ca. 3×2 mm. Testa pitted and corrugated, aril enveloping each seed.

Flowering & fruiting: May - November

Native range: Tropical America

Distribution: America, South Africa and Asia-Pacific region

Occurrence in Maldives: A common climbing herb in coastal habitats

Uses: The fruits are a source of food for birds and mammals. A decoction of the leaf is applied externally to treat urticaria and itch. A root decoction is taken to induce menstruation and to treat hysteria.

Threat & damage: It is invasive and is capable of smothering native species including large trees. The thick corky stems of the climber can pull down trees with its bulk.



Peltophorum pterocarpum (DC.) K. Heyne



Synonyms: *Peltophorum roxburghii* (G. Don) Degener, *Inga pterocarpa* DC.

Family: Fabaceae - Caesalpinioideae

Local name (Dhivehi): Reendho varey

English names: Copper pod tree, Yellow flame tree, Golden flamboyant

Description: Trees, to 20 m high, young parts brown tomentulose. Leaves bipinnate, alternate; rachis 21-40 cm long, pulvinate, brown tomentulose; pinnae 10-12 pairs, opposite, 4-15 cm long; leaflets 14-38, 1-2 × 0.3-0.8 cm, sessile, oblong, base obliquely truncate, apex obtuse or retuse, glabrous above, puberulent beneath; lateral nerves 4-8 pairs. Flowers golden yellow, in terminal or lateral racemose panicles; pedicels 7-10 mm long. Calyx lobes 5, ovate, 7-10 mm long, minutely tomentose. Petals 5, subequal, crinkled. Stamens 10, filaments free, pilose at base; anthers uniform. Fruit a pod, 5-11.5 × 1.7-2.8 cm, samaroid, oblong-elliptic, minutely tomentulose, longitudinally striated; seeds 1-4, lenticular, light brown, compressed.

Flowering & fruiting: Throughout the year

Native range: Northern Australia and Indo-Malaysia

Distribution: Widespread in the tropics

Occurrence in Maldives: Widely planted as an avenue tree

Uses: The wood is durable and suitable for furniture. Bark is used to treat dysentery and externally as a lotion to relieve eye diseases, body pains and sores.



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Pemphis acidula J.R.Forst. & G.Forst.



Synonyms: *Lythrum pemphis* L., *Melanium fruticosum* Spreng.

Family: Lythraceae

Local names (Dhivehi): Kuredhi, Keredhi

English names: Pemphis, Shrubby coral pemphis, Coastal iron wood

Description: Shrubs to small trees. Leaves opposite, 1.5-3 × 0.7- cm, oblong-obovate, obtuse at apex, acute to cuneate at base, clothed in pale prostrate hairs on both the surfaces; lateral nerves 3-5 pairs; petiole 2-3 mm long, grooved on the upper side. Flowers axillary, solitary; hypanthium 3-4 mm long, longitudinally ribbed, lobes 6, alternating with 6 small appendages. Petals 4-5 mm long, pink, obovate, wrinkled. Stamens 12, alternately long and short. Ovary 3-locular at the base and 1-locular towards the apex; stigma globular. Fruits 5-6 × 4-5 mm, nearly globose; seeds numerous, about 3 × 2 mm, angular-cuneate, margined.

Flowering & fruiting: October – December

Native range: Asia-Pacific region

Distribution: Paletropics

Occurrence in Maldives: Very common.

It is an important component of the coastal vegetation especially in the uninhabited islands.

Uses: The hard and heavy wood is of multipurpose use, ranging from ship construction to walking canes, fence posts, tool handles and anchors. It is an ideal plant for making bonsai. The young leaves are known to have antiscorbutic properties. The roots are used to stop haemorrhage after childbirth.



Persea americana Mill.



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Synonyms: *Persea gratissima* C. F. Gaertn.,
Laurus persea L

Family: Lauraceae

Local name (Dhivehi): Huiy jahaamuguri

English names: Avocado pear, Aguacate,
Soldier's butter

Description: Trees, to 15 m high. Leaf buds perulate with imbricate scales. Leaves simple, alternate, 8-18×4-6 cm, elliptic, elliptic-ovate or elliptic-oblong, base attenuate, apex obtuse; lateral nerves 5-8 pairs, pinnate; estipulate; petiole to 2 cm. Flowers bisexual, subsessile, greenish, in compact terminal panicles on branchlets. Perianth tomentose, tube turbinate, lobes 3+3. Stamens 9, perfect, those of the first and second row opposite the perianth lobes, introrse, those of third row opposite the first row; staminodes of fourth row opposite the second row, cordate, stipitate. Ovary superior, sessile, hairy; style slender; stigma simple. Fruit a berry, 10×8 cm, with copious mesocarp; seed 4 cm dia.

Flowering & fruiting: March- September

Native range: Mexico and Central America

Distribution: Cultivated in tropical and subtropical climates around the world

Occurrence in Maldives: Cultivated in homesteads

Uses: Widely cultivated for its nutritious fruit. The fruit pulp is used to treat wounds with pus. Decoction from seeds is used as mouthwash and to relieve toothache and decoction from pulp, bark and leaves is used to promote menstruation.



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Phoenix sylvestris (L.) Roxb.



Synonym: *Elate sylvestris* L.

Family: Arecaceae/Palmae

Local name (Dhivehi): Boa kadhuru

English names: Wild date palm, Silver date palm

Description: Tree palm, to 16 m tall with a large crown and rough trunk covered with persistent leaf bases. Leaves 3-4.5 m long, greyish-green, with up to 10 cm spines at base; pinnules numerous, linear, 15-45 cm long and 2-2.5 cm wide, ending in short points. Flowers small, fragrant, borne in spadices; male flowers white, female greenish. Fruiting spadix about 90 cm long, bearing oblong-ellipsoid berries, 2.5-3.2 cm long, orange-yellow when ripe. Seed

approximately 1.7 cm long, deeply grooved with rounded ends.

Flowering & fruiting: April – December

Native range: Southern part of Pakistan

Distribution: Widely grown in tropics

Occurrence in Maldives: In gardens and common places

Uses: Inflorescence sap is nutritious, cooling and laxative and is a source of sugar and toddy. Roots are used to treat toothache and nervous debility. Fruits, being a sedative and nervine tonic, are useful in relieving backache and pain in the buttocks. It is also prescribed in cough, fever, nervous debility and gonorrhoea.

Phyla nodiflora (L.) Greene



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Synonyms: *Verbena nodiflora* L., *Lippia nodiflora* (L.) Michx.

Family: Verbenaceae

Local name (Dhivehi): Hunigon difilaa

English names: Frog fruit, Sawtooth fog fruit, Turkey tangle

Description: Prostrate herbs, rooting at nodes. Leaves simple, 1-3×0.8-1.5 cm, obovate-spathulate or oblanceolate, sometimes elliptic or cuneiform, apex rounded or obtuse, base cuneate, margin sharply serrate above the middle, fleshy; petiole to 8 mm long, decurrent. Flowers 5-merous, sessile, aggregated in axillary, globose-capitate or elongate, cylindrical, stalked spikes, 1-2.5 cm long when mature and 6-9 mm across; peduncle 1.5-6 cm

long; bracts small, closely imbricate. Calyx cupular, deeply 2-cleft; lobes lanceolate. Corolla pink to white, 2-2.5 mm long, salver-form, 2-lipped, upper lip 2-lobed, emarginate, lower 3-lobed. Stamens 4, included. Drupe ca. 2 mm long, enclosing two, 1-celled pyrenes.

Flowering & fruiting: November - December

Native range: South America and the USA

Distribution: In the tropics and subtropics

Occurrence in Maldives: Common along marshy areas

Uses: An ornamental plant. The plant is useful as a remedy for burning sensation, anorexia, diarrhea, knee joint pain, fever and swelling.

Phyllanthus acidus (L.) Skeels



Synonyms: *Averrhoa acida* L., *Phyllanthus acidissimus* (Blanco) Müll. Arg.

Family: Euphorbiaceae

Local name (Dhivehi): Goanbili

English names: Grosella, Country gooseberry

Description: Small monoecious trees. Leaves distichous, 5-8×2-4 cm, elliptic to obovate, base rounded, apex gradually acute; petiole to 0.4 cm; stipules toothed. Flowers on leafless branchlets; pedicel to 5 mm, male flowers numerous, to 4 mm across. Tepals 4, unequal, 2+2, 2mm. Stamens 4, exserted; filaments recurved, 0.6 mm; anthers oblong, 0.5 mm, dehiscence vertical. Disc glands 4. Female flowers a few, or solitary. Ovary subglobose, 3-lobed; styles 3 or 4, reflexed. Drupe roughly 6-8-angular, depressed-globose, fleshy, 1.5 cm across; endocarp hard.

Flowering & fruiting: December – August

Native range: Uncertain

Distribution: Asia, parts of Central America, the Caribbean and parts of South America.

Occurrence in Maldives: Common in homesteads

Uses: Fruit is widely used for culinary purposes and to treat digestive disorders, bronchitis, diarrhea, piles and urinary . Leaves and roots are used against viper venom.



Phyllanthus amarus Schumach. & Thom.



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Synonyms: *Phyllanthus nanus* Hook. f.,
Phyllanthus swartzii Kostel.

Family: Euphorbiaceae

Local name (Dhivehi): Kaalhu lunboa

English names: Phyllanthus, Stone breaker,
Gale of flower

Description: Erect herbs. Leaves simple, 6-8 × 3-4 mm, oblong, apex obtuse to acute, base unequal sided, lower surface glaucous; stipules lanceolate, scarious. Male flowers towards the tip of branchlets, solitary, axillary; tepals 5, ovate; stamens 3, exserted; filaments connate; disc of 5 glands. Female flowers ca 1.5 mm across; tepals 5, oblong; ovary globose; style erect, recurved; pedicel to 2 mm long. Capsule ca. 2 mm across, globose;

seeds 6, trigonous, vertically muriculate.

Flowering & fruiting: July – October

Native range: Tropical America

Distribution: Widely distributed in the tropics

Occurrence in Maldives: Common in wet, partially shaded areas

Uses: An important hepato-protectant well known for the treatment of jaundice. The plant is bitter, cooling, diuretic, stomachic, febrifuge and antiseptic, and is used as a remedy in dropsy, diarrhea, dysentery, diseases of the urogenital system, scabies, ulcers and wounds. Powdered leaves and roots are applied as a poultice to lessen edematous swellings and ulcers.

Phyllanthus emblica L.



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Synonym: *Emblica officinalis* Gaertn.

Family: Euphorbiaceae

Local name (Dhivehi): Beys goanbili

English names: Emblic myrobalan, Indian gooseberry

Description: Deciduous trees, to 15 m high, bark grey-brown, rough, irregularly flaking. Leaves simple, alternate, bifarious on short deciduous branchlets, closely overlapping, 0.5-1.5 × 2-4 mm, oblong or linear-oblong, base round, apex obtuse and shortly apiculate, glabrous, membranous, subsessile. Flowers unisexual, 2-3 mm across, greenish-yellow, densely clustered in leaf axils. Male flowers: tepals 6, oblanceolate, 1.5 mm, obtuse, stamens 3. Female flowers: tepals 6, oblanceolate; ovary superior, 3-celled. Fruit a capsule 1.5-2.5 cm across, subglobose, dehiscent into 6 cocci, disc enlarged to fleshy yellowish-green, indehiscent berry.

Flowering & fruiting: July – February

Native range: South and Southeast Asia

Distribution: Throughout the tropics

Occurrence in Maldives: Fairly common in homesteads

Uses: Multipurpose tree - almost all parts are useful. Fruit is rich in Vitamin C and is a strong anti-oxidant. It is used as a remedy for vomiting, urinary discharges, diabetes, leprosy, constipation, inflammation, piles, anaemia, strangury, anuria and ophthalmia. The root bark is astringent, and is useful in ulcerative stomatitis and gastrohelcosis. The bark is used to treat gonorrhoea, jaundice, diarrhoea and myalgia.



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Phyllanthus urinaria L.



Synonym: *Phyllanthus leprocarpus* Wight.

Family: Euphorbiaceae

Local name (Dhivehi): Meyyalunboa

English names: Gripe weed, Shatterstone, Leaf flower

Description: Erect herbs; young stem and leaves reddish. Leaves simple, alternate, 0.6-1.2 × 0.4-0.6 cm, oblong, apex acute to apiculate, base oblique, margin ciliate, glabrous; stipules ca. 1mm long, linear to subulate. Male flowers in axillary clusters; tepals 6, 1-seriate, orbicular; stamens 5, filaments united; disc 6-lobed. Female flowers in lower axils, solitary; tepals 6, obovate-oblong; ovary warted without; stigma 3, each 2-fid; disc annular. Capsule 2-3 mm across, globose, 3-lobed, sessile, verrucose; seeds 6, trigonous, transversely ridged.

Flowering & fruiting: July - October

Native range: Tropical East Asia

Distribution: Widespread in the tropics

Occurrence in Maldives: Common along the sides of marshy areas

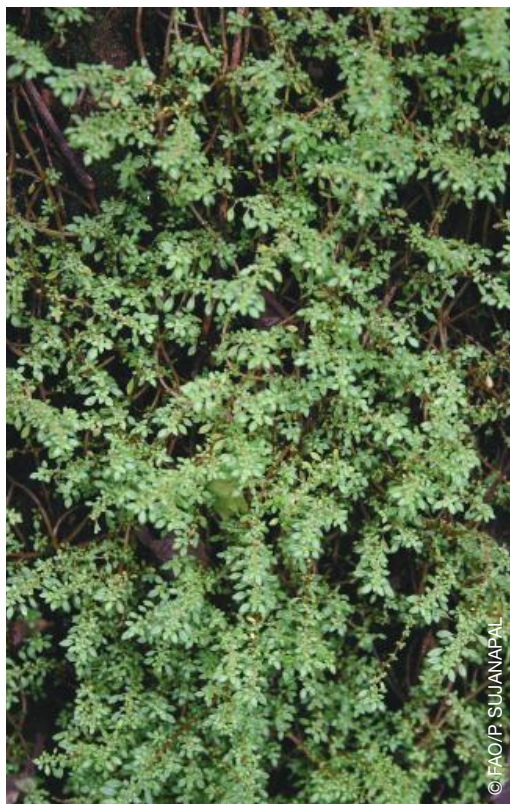
Uses: An extract of the plant is taken internally for diarrhea, kidney ailments, gonorrhoea, and syphilis.

Threat & damage: It is a weed of minor importance in both arable and non-arable lands infesting irrigated lowland and upland crop orchards in South and Southeast Asia. It is also recorded as a weed in North America, Puerto Rico, Brazil and Suriname.



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Pilea microphylla (L.) Liebm.



Synonyms: *Parietaria microphylla* L., *Urtica microphylla* (L.) Sw.

Family: Urticaceae

Local name (Dhivehi): Mariyan hui

English names: Artillery plant, Gunpowder plant, Rockweed

Description: Slender succulent herbs; branches and leaves bifarious; stem transparent. Leaves simple, opposite, 4 × 3 mm, ovate-orbicular, apex obtuse, base attenuate, subsucculent; raphides transverse; petiole to 1 mm long. Flowers monoecious in small umbellate clusters, 1-1.5 mm across. Male flowers: tepals 4, free, concave, obtuse; stamens 4. Female flowers: tepals connate, 2-4-toothed; ovary ca. 0.5 mm long, ovoid, 1-celled; ovule 1. Achene ca. 1 mm long, ellipsoid.

Flowering & fruiting: August- November

Native range: Tropical America – Brazil to Mexico

Distribution: Widespread in tropical, subtropical and temperate regions

Occurrence in Maldives: Common in the moist and shady locations, epiphytic on walls

Uses: The plant has antibacterial and antioxidant properties. An infusion of the entire plant is used as a diuretic and also to treat diarrhea and asthma. The crushed leaves are applied commonly to sores and bruises to heal them.



Pisonia grandis R. Br.



Synonym: *Pisonia morindifolia* R. Br. ex Wight

Family: Nyctaginaceae

Local name (Dhivehi): Lhos gas

English names: Lettuce tree, Grand devil's claw, Bird-catcher tree

Description: Small trees, bark smooth. Leaves ovate-oblong to oblong, 15-25 × 5-7 cm, unequal, obtuse at base, apex acute; with prominent reticulate venation and minutely puberulous in the axils of the nerves, petiole long. Flowers small, greyish, funnel shaped, dioecious with perianth about 3 mm long in terminal corymbose cymes. Calyx 5. Corolla 5. Stamens 6-10, filaments connate below into a tube. Fruits elongated to club-shaped, 6-12 × 2-3 mm, 5-ribbed, each rib bearing a row of sticky prickles about 1 mm long; seed 9-10 × 1.5-2 mm.

Flowering & fruiting: September – February

Native range: Islands in the Indian and Pacific Oceans, ranging from Madagascar to Polynesia

Distribution: Widely cultivated

Occurrence in Maldives: Common in homesteads

Uses: The succulent foliage is a popular and delicious vegetable. The leaves are used in the treatment of dysentery. Leaves are crushed or heated and applied to swellings or open ulcers, corns, calluses, and oedema of the legs for early cure.



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Pistia stratiotes L.



Synonym: *Limnonesis friedrichsthaliana* Klotzsch

Family: Araceae

Local name (Dhivehi): Kunhui

English names: Nile cabbage, Water lettuce, Water bonnets

Description: Aquatic floating herbs. Leaves sessile, tufted, obovate, 2-10 × 1-4 cm, veins prominent, white, soft, pubescent. Spathe small, to 10 mm long, basal portion convoluted, upper portion expanded into an ovate-acute limb, pale yellow; spadix with pistillate portion adnate to the spathe; female and male flowers separated by a disc-like structure. Male flowers with 4-6 anthers forming a synandrium; ovary 1-locular; ovules many, on parietal placentae. Berry small and ovoid.

Flowering & fruiting: October- March

Native range: Probably South America

Distribution: In the tropics and subtropics

Occurrence in Maldives: Common in lakes and water logged areas

Uses: Widely cultivated as an aquatic ornamental plant. Leaves and roots are used in dysuria. Leaves mixed with rice

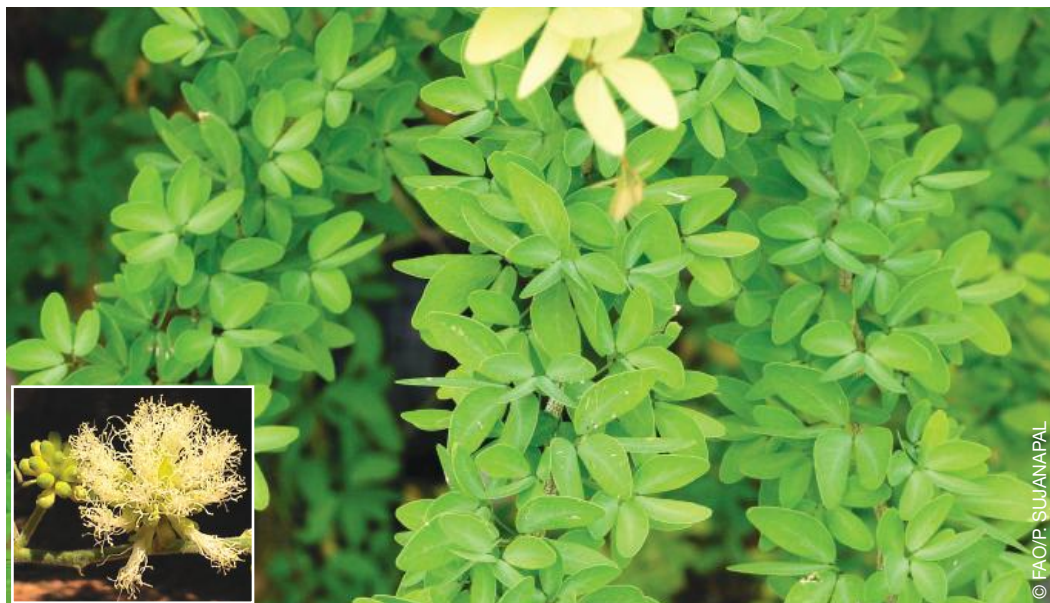
and coconut milk are given in dysentery. Ash obtained from the plant has some application against ring worm.

Threat & damage: The plant is a noxious weed of lakes, dams, ponds, irrigation channels and slow-moving waterways across the globe. It can cover water bodies and disrupt life of aquatic fauna and flora and make transport through water impossible.

Management: The most effective method is physical removal of plants and disposing them judiciously. Chemical control using herbicides may contaminate water bodies. A leaf weevil and leaf moth are known to be effective as biocontrol agents.



Pithecellobium dulce (Roxb.) Benth.



Synonyms: *Mimosa dulcis* Roxb., *Inga dulcis* (Roxb.) Willd.

Family: Fabaceae - Mimosoideae

Local name (Dhivehi): Kashi helebeli

English names: Manila tamarind, Monkeypod

Description: Trees, to 15 m high. Leaves bipinnate, alternate; stipular spines to 2 cm; rachis 1-3 cm long, pulvinate; pinnae 2, 4-10 mm long, pubescent, with a solitary gland at the top on upperside; leaflets 2, opposite, 1.5-3.5 × 0.5-1.5 cm, oblong-ob lanceolate, inequilateral, base and apex obtuse. Flowers 5 mm across, creamy, heads arranged in axillary or terminal paniced spikes; peduncle to 2 cm. Calyx campanulate, pubescent, lobes 5. Petals 5, to 4 mm, connate in the middle, densely tomentose without. Stamens many, monadelphous; filaments to 7 mm. Fruit a pod, 8 × 1 cm, circinate or falcate, moniliform, dehiscent; seeds orbicular; aril white.

Flowering & fruiting: November – March

Native range: Tropical America

Distribution: Widely cultivated in the tropics

Occurrence in Maldives: Cultivated in homesteads

Uses: The wood is hard and is used for making boxes, crates and wagon wheels. The seed oil, after refining and bleaching, is used to make soap. The bark is employed as a fish poison. The gum exuding from the trunk is valuable as tannin. The plant is known to be abortifacient, anodyne, astringent and larvicidal and a folk remedy for convulsions, dysentery, dyspepsia, earache, leprosy, peptic ulcers, sores, toothache and venereal diseases.

Threat: It is an invasive plant especially in the coastal dunes and mangrove areas.



Plumeria obtusa L.



Synonym: *Plumeria apiculata* Urb.

Family: Apocynaceae

Local name (Dhivehi): Gulchampaa

English names: White champa, Dwarf Plumeria, White frangipani

Description: Deciduous trees, to 10 m high, branchlets terete, 2-25 cm thick, with prominent leaf scars; latex milky. Leaves simple, alternate spiral, clustered; 20-50×8-12 cm, obovate-spathulate, oblong, oblanceolate; base cuneate, apex obtuse or acute, margin entire, glabrous, sub-coriaceous; lateral nerves to 25-45 pairs, parallel, prominent, intercostae scalariform; estipulate; petiole 3-8 cm long, stout, glabrous. Flowers bisexual, white, in terminal corymbose stout cymes. Calyx cupular, 5 mm; lobes 5, subequal. Corolla 6 cm across; tube 4 cm, expanded above the

middle; lobes 5, obovate, overlapping to the left, obtuse. Stamens 5, attached at the base of the tube, included. Ovary half inferior, globose, ovules many; stigma 2-lobed, subsessile. Fruit an aggregate of 2 follicles, pustulate; seeds winged.

Flowering & fruiting: December – June

Native range: The Bahamas and the Greater Antilles

Distribution: Grown as an ornamental plant in the tropics and subtropics

Occurrence in Maldives: Planted in home gardens

Uses: The stem bark has anti-ulcer properties. The plant extract heal indomethacin induced stomach ulceration. A decoction of the bark is given in varying doses as a purgative or as a remedy against oedemas.

Plumeria pudica Jacq.



Synonyms: *Plumeria caracasana* J. R. Johnst.,
Plumeria cochleata S. F. Blake

Family: Apocynaceae

Local name (Dhivehi): Bodu gulchampaa

English name: Fiddle leaf plumeria

Description: Shrubs, branchlets terete, latex milky. Leaves simple, alternate spiral, clustered at the apex of branchlets, to 25 × 5 cm, spatulate, base cuneate, apex acuminate, membranous; lateral nerves to 25-45 pairs, parallel, prominent; petiole 1.5-3 cm long, stout, glabrous. Flowers white, in terminal corymbose stout cymes. Calyx cupular, 5 mm; lobes 5, subequal, round, obtuse. Corolla to 6 cm across; tube to 4 cm, expanded from above the middle; lobes 5, obovate, overlapping to the left, obtuse. Stamens 5, attached at the base of the tube, included. Ovary half inferior, globose; ovules many; stigma 2-lobed. Fruit an aggregate of 2 follicles.

Flowering & fruiting: August – March

Native range: Panama, Colombia and Venezuela

Distribution: Widely grown in the tropics

Occurrence in Maldives: Planted as an ornamental

Uses: The latex has anti-inflammatory and antinociceptive activities. It is also used for the treatment of skin diseases and tooth pain.



Plumeria rubra L.



Synonym: *Plumeria acutifolia* Poir.

Family: Apocynaceae

Local name (Dhivehi): Gulchampaa raiy

English names: Red frangipani, Temple tree, Pagoda tree

Description: Deciduous trees, to 10 m high, latex milky. Leaves simple, alternate, spiral, clustered, 20-43×7-10 cm, obovate-spathulate, base cuneate, apex acuminate or acute, subcoriaceous; lateral nerves to 40 pairs, parallel, prominent, intercostae scalariform; petiole 6-8 cm long, stout. Flowers in terminal corymbose, stout cymes. Calyx cupular, 3 mm; lobes 5, subequal, round. Corolla 4-5 cm across, pink or cream with yellow centre; tube 2 cm, expanded from above the middle; lobes 5, obovate, overlapping to the left, obtuse. Stamens 5, attached at the base of the tube, included. Fruit an aggregate of 2 follicles, to 25×4 cm, pustulate; seeds winged.

Flowering & fruiting: November – April

Native range: Mexico, Central America, Colombia and Venezuela

Distribution: Widely naturalised in the tropics and subtropics

Occurrence in Maldives: Planted in gardens or as an avenue tree

Uses: Leaves are useful to treat inflammations. The milky latex, which is poisonous if ingested, is employed as a good rubefacient in rheumatism.



Polyalthia longifolia (Sonn.) Thwaites



Synonyms: *Unona longifolia* (Sonn.) Dunal, *Uvaria longifolia* Sonn.

Family: Annonaceae

Local name (Dhivehi): Dhebudhaaru

English names: Cemetery tree, Mast tree, Telegraph pole tree

Description: Tall evergreen trees; bole straight; crown conical; bark grayish-brown; young branches spreading, pendulous. Leaves simple, alternate, distichous, pubescent when young; 15–23×2–4 cm, ovate-lanceolate or lanceolate; base round; apex acuminate, strongly undulate, coriaceous; petiole 10–15 mm. Flowers green; 2.5–3 cm long, numerous, in umbels or fascicles at the axis of fallen leaves; pedicels slender, 2–3 cm long, slightly pubescent. Sepals 3, 4×4 mm, ovate-triangular, pubescent, connate at base. Petals 3+3, subequal, linear, broad at base; outer petals 30×5 mm; inner ones 10–25×2.5 mm. Stamens numerous. Carpels many, puberulous, ovoid, style oblong; stigma sessile; ovule one. Fruit aggregate of berries; berry 2.5×1.5 cm ovoid to ellipsoid, glabrous, reddish to black; seed one, ovoid, smooth or slightly grooved, pale brown.

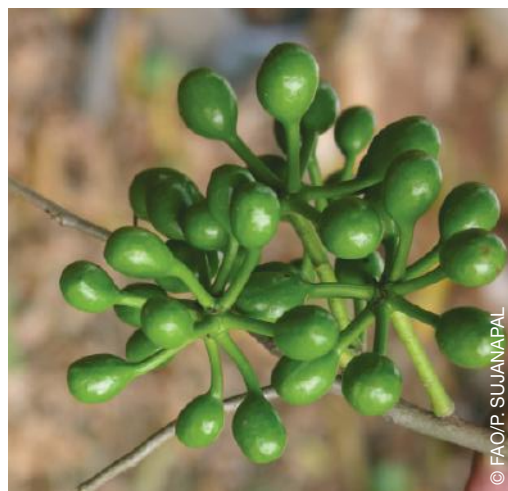
Flowering & fruiting: March – August

Native range: India and Sri Lanka

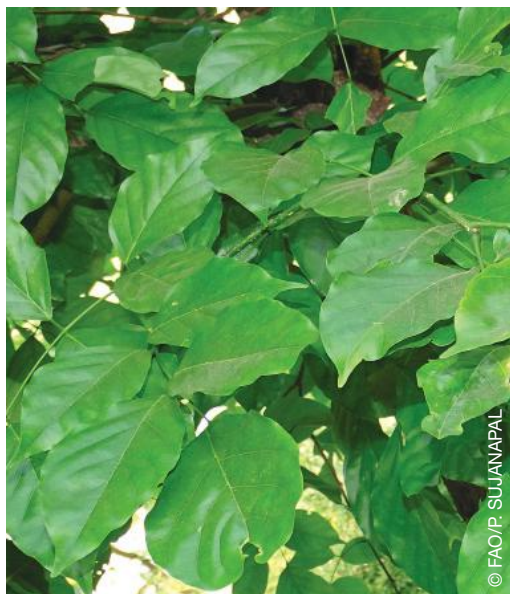
Distribution: Introduced to many tropical countries

Occurrence in Maldives: Planted as an avenue tree in some of the islands

Uses: The plant possesses antimicrobial, anti-inflammatory and purgative properties. A decoction of the leaf is given for diarrhea. Bark and leaves are used to treat fever, skin diseases and diabetes.



Pongamia pinnata (L.) Pierre



Synonyms: *Cytisus pinnatus* L., *Pongamia glabra* Vent.

Family: Fabaceae - Papilionoideae

Local name (Dhivehi): Ofey

English names: Hongay oil tree, Indian beech tree, Pongam oil tree

Description: Evergreen trees, to 15 m high, bark grey, smooth, brown-speckled. Leaves imparipinnate, alternate; rachis 10-15 cm long, pulvinate; leaflets 5-7, opposite, 4.5-12 × 2-7 cm, elliptic-lanceolate, ovate or ovate-oblong, apex acuminate; lateral nerves 5-8 pairs. Flowers purplish-white, 15-18 mm long, in lax axillary racemes. Calyx tube campanulate; minutely 5 toothed. Petals 5, clawed; standard suborbicular with curved folds above the claw; wings obliquely oblong, slightly adnate above the claws to the obtuse keel petals. Stamens 10, monadelphous, the vexillary stamen free below and above; anthers uniform. Fruit a pod, 4-5 × 2-2.5 cm, obliquely oblong, thick, pointed at both ends, indehiscent; seed one, reniform.

Flowering & fruiting: April – December

Native range: South and Southeast Asia

Distribution: Australia, South and Southeast Asia

Occurrence in Maldives: Planted as an avenue tree in some of the islands

Uses: A multipurpose tree. The wood is used for making cabinets and cart wheels. The oil from the seeds is used for leather dressing, soap making, lubrication and medicinal purposes. The oil also has good thermal efficiency as a biodiesel. The roots are good for cleaning foul ulcers, wounds and gonorrhoea. The fresh bark is given internally to get relief from bleeding piles.



Portulaca oleracea L.



Synonyms: *Portulaca consanguinea* Schltldl., *Portulaca latifolia* Hornem.

Family: Portulacaceae

Local names (Dhivehi): Gedha, Gandhaa fellaa

English names: Common purslane, Garden purslane, Indian purslane

Description: Annual fleshy herbs, with numerous decumbent branches. Leaves spiral or sub-opposite, often crowded at ends of branches, 1-3×0.2-1.5 cm, sessile or subsessile, obovate or spatulate, cuneate or attenuate at base, rounded or truncate at apex. Flowers sessile, ca. 3 mm across, terminal, 1-15, surrounded by a cluster of crowded leaves; bracts ovate-acuminate, membranous. Sepals connate at base into a ca. 2 mm long tube. Petals 4 or 5, connate at base, broadly obovate or oblong-obovate, rarely emarginate at apex, 4-8×2-6 mm, yellow. Stamens 7-12. Ovary ovoid.

Capsules ovoid, enveloped by marcescent corolla, dehiscent transversely in middle; seeds many, reniform, 0.5-1mm across, granular, dull black.

Flowering & fruiting: June – September

Native range: Probably North Africa, the Middle East and the Indian subcontinent

Distribution: Pantropical

Occurrence in Maldives: Common in open areas

Uses: Commonly eaten fresh or cooked or used in salads, soups, stews, and tomato sauces. The whole plant is useful in gastropathy, tumours, inflammations, wounds, jaundice, diabetes, cephalalgia, burning sensation, abdominal disorders, piles, oedema, bronchial asthma, poisoning, polyuria, eye diseases and trachyphonia.

Threat: The plant is invasive in agricultural fields in some countries.

Pouzolzia zeylanica (L.) Benn. & R. Br.



Synonyms: *Parietaria zeylanica* L. *Boehmeria alienata* Willd.

Family: Urticaceae

Local name (Dhivehi): Reen hui

English name: Pouzolzia

Description: Slender procumbent herbs. Leaves simple, alternate, 1.5-3 × 1-2 cm, ovate-elliptic, base rounded, apex acute, sparsely strigose, membranous, lateral nerves 3 or 4 pairs, basal pair opposite; petiole to 2 cm long. Flowers in axillary, subsessile clusters. Male flowers: 3-4 mm across; tepals 4, 1.5-2 mm long, ovate-lanceolate, sparsely villous; stamens 4, filaments ca. 2 mm long. Female flowers: tepals connate; style linear ca. 2 mm long, thinly pubescent. Achenes 2-winged.

Flowering & fruiting: August- December

Native range: South Asia to Australia and Polynesia

Distribution: Pantropical

Occurrence in Maldives: In open areas

Uses: Tender leaves and young shoots are used as a vegetable. The juice of the plant is used to treat boils, dysentery, fevers, toothaches and urinary problems. Leaf and stem paste is applied locally to relieve itching.



Premna serratifolia L.



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Synonym: *Premna integrifolia* L.

Family: Verbenaceae

Local names (Dhivehi): Ginaveli, Dhakandhaa

English name: Headache tree

Description: Trees, to 8 m high. Leaves simple, opposite; 2.5-8.5 × 2-7.2 cm, elliptic-oblong, margin entire or subserrate, chartaceous; lateral nerves 3-5 pair, pinnate, prominent, puberulous beneath; petiole pubescent. Flowers bisexual, greenish-white, in terminal corymbose paniced cymes. Calyx small, campanulate, 2 lipped, 5 lobed. Corolla tube short, villous inside, lobes 5. Stamens 4, didynamous, inserted below the throat of the corolla tube; anther ovate. Ovary superior, 2-4celled, ovules 4; style linear; stigma shortly bifid. Fruit a drupe, seated on the calyx, globose, purple; seeds oblong.

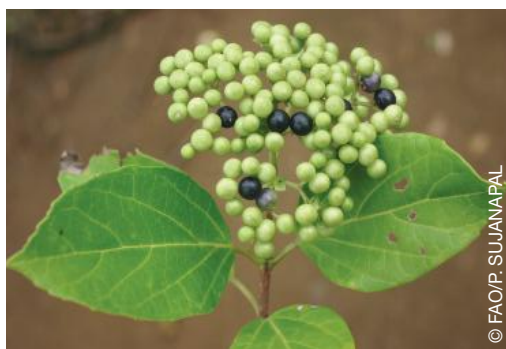
Flowering & fruiting: May – November

Native range: Asia-Pacific

Distribution: Widely in the tropics

Occurrence in Maldives: Common in natural forest areas

Uses: The roots are astringent, anodyne, anti-inflammatory, cardiotoxic, expectorant, depurative, digestive, stomachic, laxative, febrifuge, antibacterial and tonic. The leaves are stomachic, carminative and galactagogue and are useful as a remedy in dyspepsia, flatulence, colic, fever, rheumatism and tumours.



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Prosopis juliflora (Sw.) DC.



Synonyms: *Mimosa juliflora* Sw., *Acacia juliflora* (Sw.) Willd.

Family: Fabaceae - Mimosoideae

Local name (Dhivehi): Giulhilaashi

English names: Velvet mesquite, Ironwood

Description: Small trees, bark deeply fissured; branchlets armed, zig-zag, spines straight, ca. 2 cm long, solitary or paired, divergent. Leaves bi-pinnate, alternate; stipular thorn to 1.5 cm long; petiole 1-5 cm long; pinnae 2-4, even pinnate, 3-11 cm long; leaflets 22-36, opposite; lamina 6-23×1.5-5 mm, oblong, base obtuse, apex obtuse. Flowers bisexual, 1.5 mm across, greenish-yellow, in axillary spikes, to 12 cm long. Calyx 1.5 mm long. Petals 5, ligulate. Stamens 10. Fruit a pod, 20-30×1.5 cm, pale yellow, glossy with straight parallel sutures; seeds 10-30, hard, ovoid, brown, embedded in pulpy mesocarp.

Flowering & fruiting: October - March

Native range: Central and South America and Mexico

Distribution: Widely naturalized in the tropics

Occurrence in Maldives: It is of recent occurrence in agricultural areas in a few northern islands

Uses: A multipurpose tree used for timber, fuel wood, charcoal, animal feed, medicinal purposes and for reclamation of wastelands and sand dunes.

Threat & damage: The tree is aggressive in growth and can form dense thickets affecting the growth of native plants. The carrying capacity of the habitats will be seriously affected by the tree. It can also dry out the soil and inhibit growth of herbaceous flora. The pollen of *Prosopis* may cause allergic reactions in humans.

Management: Thinning and pruning of seedlings to increase spacing may be useful. Young trees can be killed by winter burning. Basal bark or cut-stump application of herbicides is effective. Since the tree is of recent introduction to Maldives and the spread is currently very limited, implementation of suitable management techniques will help in its eradication.

Psidium guajava L.



Synonyms: *Guajava pumila* (Vahl) Kuntze, *Myrtus guajava* (L.) Kuntze

Family: Myrtaceae

Local name (Dhivehi): Feyru

English names: Guava, Common guava

Description: Small trees, stem smooth with peeling bark; young stem 4-angled. Leaves subopposite, 16-11×2.5-5 cm, elliptic-oblong, base rounded to obtuse-cuneate, apex acute-apiculate, hirsute on both sides when young, glabrous on ageing except the nerves, thin coriaceous; lateral nerves prominent; petioles 0.6-1 cm long. Cymes axillary, 1-3-flowered; peduncles 0.5-1.2 cm long; pedicel short. Calyx tube 4-9 mm long, ovoid, densely hirsute; lobes 4, united and closed in buds. Petals 4, white, 1-1.5 cm long, broadly ovate, caduceous. Stamens many. Ovary globose, many-celled; ovules numerous; style subulate. Fruit 2.5-5 cm diam, globose, crowned by persistent calyx lobes; seeds many, embedded in fleshy pulp.

Flowering & fruiting: March – May

Native range: Tropical and subtropical America

Distribution: Naturalised widely in the tropics and subtropics

Occurrence in Maldives: Cultivated in homesteads

Uses: Edible fruits are rich in vitamins A and C. The roots are astringent and constipating and used to treat diarrhea and dysentery. The leaves are useful as a remedy for cholera, diarrhea, vomiting, nephritis and gum boils.

Threat & damage: It is weedy in several tropical countries and can displace native species by forming dense thickets.



***Psilotum nudum* (L.) P. Beauv.**



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Synonyms: *Lycopodium nudum* L., *Psilotum triquetrum* Sw.

Family: Psilotaceae

Local name (Dhivehi): Rubbudufilaa

English names: Cocks crow, Upright whisk fern

Description: Erect to pendent terrestrial or epiphytic herbs; aerial stem yellow-green, ridged, rhizome branching, creeping. Aerial shoots erect, firm or sometimes flaccid in shaded situations, branched repeatedly in different planes in the upper part. Branches prominently 3x7-ribbed, subterete in cross-

section, to 4.5 mm diam; stomata restricted to furrows between ribs. Sterile leaves restricted to ribs, subspiral, 1x2.5 mm long, terete, pale yellow, translucent towards the tips. Synangia 1.5 - 2 x 2 -2.5 mm.

Reproductive structures: Occur throughout the year

Native range: The United States of America

Distribution: Occurs widely in the tropics and subtropics

Occurrence in Maldives: In coconut groves

Uses: The spores are used as a laxative.

Pterocarpus indicus Willd.



Synonyms: *Lingoum indicum* (Willd.) Kuntze, *Lingoum rubrum* Rumph.

Family: Fabaceae - Papilionoideae

Local name (Dhivehi): Ofi ealy gas

English names: Amboyna wood, Burmese rosewood, Red sandalwood

Description: Large, buttressed, evergreen trees with broad crown and drooping branches; bark light brown, finely fissured, exudate red. Leaves alternate, imparipinnate, 20-40 cm long; rachis slender, swollen at the base; leaflets 5-11, alternate, thin, shiny green to yellow-green, ovate, 5-10 × 3.8-5 cm, apex acuminate with a rounded tip, base rounded or shortly cuneate. Flowers golden yellow, borne in axillary panicles, 10-15 cm long. Calyx 6 mm long, turbinate. Corolla 1.5 cm long, exserted, petals 5, 1.5-1.8 cm long, stalked at base, becoming crinkled, standard orbicular or broadly ovate, 1.5

cm wide, rolled backwards, wings and keel petals 2 each. Fruit orbicular, 4.5-5 cm across, including the broad, thin, rigid wing stalked at the base with a pointed style at one side, indehiscent; seeds 1 or 2.

Flowering & fruiting: October - January

Native range: Southeast Asia

Distribution: South and Southeast Asia, USA, Vietnam and Puerto Rico

Occurrence in Maldives: Common. Planted as an avenue tree.

Uses: The wood is hard and durable and used for construction purposes and for making furniture. A reddish exudate from the bark is used to treat tumours, especially of the mouth. Indigenous people apply the resin to mouth sores and the root juice is applied to the sores from syphilis. The plant has also been listed as a remedy for bladder ailments, headache, stones, and thrush.

Pueraria phaseoloides (Roxb.) Benth.



Synonyms: *Dolichos phaseoloides* Roxb., *Phaseolus barbatus* Wall.

Family: Fabaceae - Papilionoideae

Local name (Dhivehi): Riha thui

English names: Tropical kudzu, Puero, Wild kudzu vine

Description: Twining gregarious herbs. Leaves 3-foliolate; leaflets unlobed, broadly obliquely ovate to rhombic-ovate, 6-10 × 5.5-9 cm, base cuneate, apex acute, apiculate, basally 3-nerved, lower surface appressed, silky. Flowers subsessile, clustered on long-peduncled racemes. Calyx teeth short, upper 2 connate. Corolla reddish pink. Stamens 10, monadelphous. Ovary sessile; ovules many. Pods to 10 cm long.

Flowering & fruiting: October - March

Native range: Tropical Asia

Distribution: Throughout the humid tropics

Occurrence in Maldives: Fairly common in disturbed areas

Uses: A major cover crop. A poultice of the plant is applied to ulcers and boils, especially in children. The tuberous roots are edible and the stems can be used as ropes.

Threat & damage: An invasive vine that can grow into dense colonies and shade out and smother native vegetation including tall trees.

Management: Physical control is laborious and is not a long-term solution. Use of herbicides is reported to be efficient in managing the spread of the weed.



Punica granatum L.



Synonym: *Punica spinosa* Lam.

Family: Punicaceae

Local name (Dhivehi): Annaaru

English name: Pomegranate

Description: Shrubs; branchlets terete, usually ending in spines. Leaves glabrous, lustrous 19-35 × 8-12 mm, oblong-lanceolate to obovate or elliptic, subpetiolate, entire, apex sub-acute to obtuse. Flowers scarlet red or white, conspicuous, 3 cm or more across. Calyx 20-35 mm long, indented slightly above the middle, reddish, succulent; lobes 5-7. Petals and stamens inserted at the throat of the calyx. Petals 16-20 × 10-12 mm, broadly obovate, wrinkled, alternating with the sepal lobes. Filaments multiseriate, persistent. Ovary subglobose, reddish; stigma simple. Fruit globose, 2-8 cm in diam, pale red to scarlet, partitioned by thin leathery yellow septa; seeds red or pink, angular, testa thick, fleshy and juicy.

Flowering & fruiting: March – July

Native range: Iran and the Himalayas in Northern India

Distribution: Widely cultivated in the tropics

Occurrence in Maldives: Cultivated in homesteads for edible fruits

Uses: The fruits are also useful as a remedy for anaemia, hyperdipsia, ophthalmodynia, pectoral diseases, bronchitis and otalgia. The flowers are styptic to the gums and are useful in vomiting, ophthalmodynia, ulcers, pharyngodynia and hydrocele.



Rhizophora apiculata Blume



Synonym: *Rhizophora candelaria* DC.

Family: Rhizophoraceae

Local name (Dhivehi): Thakafathi

English names: Pointed Asiatic mangrove,
Tall-stilt mangrove

Description: Trees to 15 m high; trunk and lower branches supported by numerous corky, lenticellate, profusely looping stilt roots and prop roots; bark brown, fissured. Leaves simple, opposite, decussate, 13-17 × 4-7 cm, elliptic, oblanceolate or ovate-lanceolate, dark green above, pale green beneath, clustered towards the apex; stipules interpetiolar, pale red. Flowers greenish-white, to 2.2 × 1.5 cm, sessile, in axillary unbranched 2-flowered cymes. Calyx externally fissured, brownish-yellow outside and yellowish-white; lobes 4, ovate-oblong, acute, fleshy, persistent. Petals 4, free, narrow-lanceolate, acute, white, thin,

flat, persistent. Stamens 11 or 12, free, inserted on the margin of the receptacular disc. Fruit a drupe, 2-4 cm long, conical, pericarp brown, thick, calyx lobes reflexed; seed one; hypocotyle to 50 × 1.8 cm, piercing the apex of the fruit, cylindrical, thick towards the radicle tip.

Flowering & fruiting: Throughout the year

Native range: Asia-Pacific region

Distribution: Asia-Pacific and Australia

Occurrence in Maldives: Rare. Restricted to some of the islands

Uses: The viviparous seeds are edible. The wood is a source of tannin and used as a substitute for petroleum coke. It is also used to make charcoal. Tannin from the bark is useful as a mosquito repellent. The intricate stem with several stilt roots are effective as tide-brakers and check land run off and form an ideal niche for several faunal species.

Rhizophora mucronata Lam.



Synonym: *Rhizophora candelaria* Wight & Arm.

Family: Rhizophoraceae

Local name (Dhivehi): Randhoo

English names: Stilted mangrove, Loop-root mangrove, Red mangrove, Asiatic mangrove.

Description: Small trees; trunk and lower branches supported by numerous profusely looping stilt-roots and prop roots, lenticellate. Leaves simple, opposite decussate, 10-15 × 5-9 cm, stipulate, elliptic-ovate, green above, pale beneath with numerous black dots; stipules 2, interpetiolar, overlapping the apical bud. Flowers yellowish-white, to 2.5 cm across, in axillary dichotomously or trichotomously branched or unbranched 2-4 flowered cymes. Calyx yellowish-white, lobes 4, thick. Petals 4, white, lanceolate, densely white hairy along the margins, uniseriate. Stamens 8, free. Fruit to 7 cm long, ovoid,

pericarp brown; seed one, hypocotyle to 50 × 1.8 cm, cylindric, tapering towards the radicle end, surface rough warty.

Flowering & fruiting: April - October

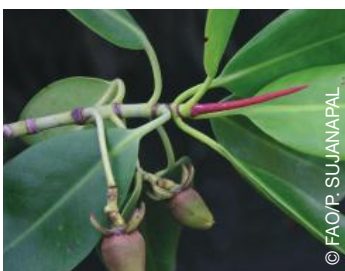
Native range: Asia-Pacific region

Distribution: Paleotropics

Occurrence in Maldives: Rare. Observed in northern and southern atolls.

Uses: Wood and stilt roots are used for constructing traditional houses. The wood is also used for making fish traps, house frames, piling, poles and good charcoal. Leaves are poulticed onto armoured fish injuries. Hypocotyle is edible after processing and cooking.

Note: This front line mangrove species grows well in high saline and semi-sandy areas and can be considered as a suitable species for shoreline restoration.



Ricinus communis L.



Synonyms: *Cataputia major* Ludw., *Croton spinosus* L.

Family: Euphorbiaceae

Local name (Dhivehi): Aamanaka

English names: Castor oil plant, Castorbean, Palma christi

Description: Monoecious, branched glaucous shrubs. Leaves alternate, palmately 6-8 lobed, peltate, to 20×24 cm; lobes 9-15×3-6 cm, lanceolate, margin coarsely serrate, apex acuminate; petiole to 18 cm long. Flowers in terminal paniculate racemes, pale yellow; male flowers below, female ones above. Male flowers: perianth cupular, 3-5-lobed, ca. 4 mm long, lanceolate; stamens many, filaments connate, repeatedly branched. Female flowers: perianth of 5 subequal tepals, ca. 5 mm long, lanceolate. Ovary globose, 3-locular, echinate; ovule 1-per locule; styles papillose. Capsule 1.6-2 cm across, 3-lobed, prickly; seeds oblong, marbled, carunculate.

Flowering & fruiting: May – June

Native range: Tropical Africa

Distribution: Cultivated throughout the tropics

Occurrence in Maldives: Common in disturbed forest areas and in homesteads

Uses: Seeds are the source of castor oil. The roots are useful in gastropathy, constipation, inflammations, fever, strangury, bronchitis, skin diseases, colic and lumbago. The leaves are useful in burns, nyctalopia, rheumatoid arthritis and urodynia.

Threat & damage: A fast-growing shrub which can form dense thickets and shade out the native flora which affect the biodiversity of the invaded areas.

Management: Burning is adopted to control large thickets. However, the plant can re-colonize in newly burnt areas quicker than native species. Seedlings and young plants can be removed by hand pulling whereas larger plants may require cut-stump treatment with herbicides.

Russelia equisetiformis Schtdl. & Cham.



Synonym: *Russelia juncea* Zucc.

Family: Scrophulariaceae

Local name (Dhivehi): Badikulhi

English names: Coral plant, Firecracker plant

Description: Shrub with long rush-like ribbed green stems; branches very slender, whorled. Leaves small, whorled, the upper

leaves opposite, about 2 mm long, linear. Flowers 2 cm long, scarlet, in axillary paniculate racemes. Calyx 2 mm long, campanulate. Corolla tubular; limb small, to 2 cm across, 2-lipped, sub-equally 5-lobed. Stamens 4, didynamous, included. Fruit a capsule but rarely set.

Flowering & fruiting: January - September

Native range: Mexico

Distribution: Widespread as an ornamental

Occurrence in Maldives: In homesteads and gardens

Uses: The plant has anti-microbial and antiinocceptive properties and used to cure inflammation and pain. It is also used for the treatment of diabetes and leukaemia. The plant extract is known to improve hair growth.



Saccharum officinarum L.

Synonyms: *Arundo saccharifera* Garsault, *Saccharifera officinalis* Stokes

Family: Poaceae/Gramineae

Local name (Dhivehi): Udhhandi

English names: Sugarcane, White salt

Description: Shrubby grass, culm solitary or branched, erect, waxy below nodes. Leaf-blades flat, to 150 × 6 cm, scabrous; ligule membranous, ciliate. Panicles ovate-pyramidal, to 90 cm, dense, silvery. Spikelets linear-oblong, to 0.4 cm, pale, surrounded by dense, white-silky hairs, to 0.2 cm; callus densely white silky-hairy. Lower glume to 0.4 cm, papyraceous, acute; upper glume lanceolate, to 0.4 cm, keels scabrous; lower lemma lanceolate, to 0.4 cm, hyaline, veinless; upper lemma 0 or reduced; palea lanceolate, apically ciliate.

Flowering & fruiting: Depends upon the cultivars

Native range: India and probably Southeast Asia

Distribution: Cultivated throughout the tropics

Occurrence in Maldives: Cultivated in homesteads

Uses: Apart from sugar production, it has many other industrial uses. The young unexpanded inflorescence is eaten raw, steamed or toasted. Bagasse is used in the manufacture of paper, cardboard, and fuel. The reeds are made into pens, mats, screens, and thatch. The ground and dried cane is reported to be an antidote, antiseptic, antivinous, bactericide, cardiotoxic, demulcent, diuretic, laxative, pectoral, refrigerant and stomachic.



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Sambucus canadensis L.



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Synonym: *Sambucus simpsonii* Rehder

Family: Caprifoliaceae

Local name (Dhivehi): Hikan dhu

English names: American elderberry, Sweet elder

Description: Deciduous shrubs. Leaves simple pinnate; leaflets 5-9, 10 × 5 cm, lanceolate or elliptic, margin serrate; petiole and rachis narrowly grooved. Inflorescence a corymb, terminal. Flowers white, 5-6 mm across. Calyx lobes 5. Petals 5. Stamens 5. Fruit dark purple to black, 3-5 mm in diameter, produced in drooping clusters.

Flowering & fruiting: December - June

Native range: Eastern North America

Distribution: Widely grown in the tropics

Occurrence in Maldives: Grown as an ornamental plant.

Uses: Leaves and inner bark are used as an insecticide and a dye. Stems can be hollowed out and used for making spouts, musical instruments and toys. Fruit may be used to make preserves, jellies, pies and wine. The roots, stems, leaves and bark contain glycoside and is toxic to humans and livestock.



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Sauropus androgynus (L.) Merr.



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Synonyms: *Aalius lanceolata* (Hook. f.) Kuntze, *Clutia androgyna* L.

Family: Euphorbiaceae

Local name (Dhivehi): Boa kaalhulun

English names: Katuk, Star gooseberry, Sweet leaf

Description: Erect monoecious shrubs. Leaves simple, alternate, 2.5-10 × 1.5-13.5 cm, triangular-lanceolate, acuminate at apex, broad and truncate at base, glaucous beneath. Flowers axillary, solitary or clustered. Perianth 1-seriate, 6-lobed. Stamens 3, filaments connate to a column. Ovary globose, 0.15-0.2 cm diam, 3-celled; ovules 2 in each cell; style 3; stigma curved. Capsules globose, 1-1.5 cm across.

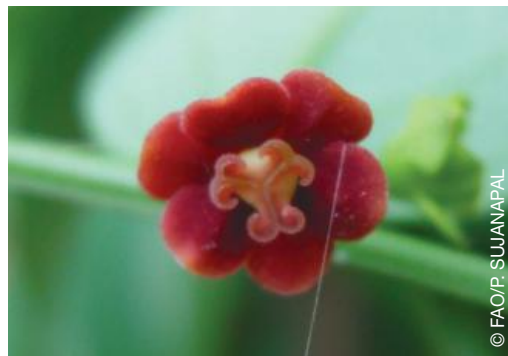
Flowering & fruiting: Throughout the year

Native range: Southeast Asia

Distribution: Widely cultivated in the tropics

Occurrence in Maldives: Cultivated in homestaeds

Uses: Leaves are used as a vegetable and a good source of Vitamin K. Freshly collected leaves also has high levels of pro-vitamin A carotenoids, high levels of Vitamins B and C, protein and minerals. Leaves are also used after childbirth to help the womb recover. A decoction of the root is said to relieve urinary disorders.



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Scaevola taccada (Gaertn.) Roxb.



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Synonyms: *Scaevola sericea* Vahl., *Lobelia taccada* Gaertn.

Family: Goodeniaceae

Local names (Dhivehi): Magoo, Geraa

English names: Beach plum, Fan flower

Description: Shrubs; stem greenish-white. Leaves simple, alternate, spirally arranged, rarely opposite, 8-15 × 4-7 cm, obovate. Flowers white in axillary cymes, or solitary; bracts opposite. Calyx epigynous; tube adnate to ovary; limb cupular, short, 5-dentate or 5-lobed. Corolla lobes 5, posterior side longitudinally divided near to the base, subequal. Fruit a drupe, white, often fleshy; endocarp hard; each locule with 1 seed.

Flowering & fruiting: Throughout the year

Native range: Tropical and subtropical coasts of Indo-Pacific region

Distribution Indo-Pacific region, America and the Caribbean

Occurrence in Maldives: Very common among coastal vegetation

Uses: The shrub is often planted to prevent coastal erosion. The fragrant flowers and seeds are used to make garlands. In traditional medicine, the plant is used as an antidiabetic, antipyretic, anti-inflammatory and as a skeletal muscle relaxant. Juice of the fruit is soothing and refreshing for inflamed eyes.

Threat & damage: The plant can form dense thickets on sand dunes and compete with native coastal vegetation. Its growth in coastal areas can end up in an increased flow of sediments and nutrients to the sea due to dune destabilization. Spread of the weed is mainly through fruits and stem segments dispersed through ocean currents.



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Schefflera actinophylla (Endl.) Harms



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Synonyms: *Aralia longipes* W. Bull, *Brassaia actinophylla* Endl.

Family: Araliaceae

Local name (Dhivehi): Boathashibageecha

English names: Octopus tree, Australian ivy-palm

Description: Multi-trunked, evergreen tree up to 15m tall; bark smooth, greenish-grey. Leaves alternate, petioles up to 60 cm, palmately compound, leaflets 7-16, light green, oblanceolate, shiny above, petiolule 40 cm long. Flowers in dense clusters in large, red, showy inflorescence at apex. Flower small, petals 3-5 mm long. Fruit is

dark red, ribbed, up to 3-5mm long; seed one, pale brown, oval.

Flowering & fruiting: January–December

Native range: North and East Australia and South and Southeast New Guinea

Distribution: Tropical Asia to Australia

Occurrence in Maldives: Planted as an avenue tree

Uses: No uses other than an ornamental tree

Threat: The tree is considered as an environmental weed in its native range in Australia. It is also recorded as an invasive species in Florida, Hawaii and in several South Pacific islands.

Senna alata (L.) Roxb.



Synonyms: *Cassia alata* L., *Cassia bracteata* L.f.

Family: Fabaceae - Caesalpinioideae

Local name (Dhivehi): Ranauraa

English names: Candle bush, Ringworm cassia, Winged senna

Description: Erect shrubs. Leaves pinnate, 28-60 cm long; leaflets 6-12 pairs, 4-13 × 2-6 cm, oblong to obovate-oblong, apex rounded, base rounded to subcordate; stipules 1-2 cm long, deltoid, base auriculate, apex acute to acuminate. Inflorescence terminal or axillary, many-flowered spicate raceme, 40-60 cm long. Flowers yellow; pedicels 4-8 mm long; bracts petaloid, yellow, 1-2 cm long, ovate-elliptic, subacute. Sepals 1-1.5 cm long, yellow. Petals yellow, 1.5-2 cm long, obovate. Stamens 10, anthers 2 large, 5 medium-sized, and 3 small. Pods 9-14

× 1.5-2 cm, linear, 4-winged, septate, dehiscent; seeds many, 5-7 × 4-5 mm, rhomboid, compressed, dark brown.

Flowering & fruiting: September- January

Native range: Tropical America

Distribution: Pantropical

Occurrence in Maldives: Grown as an ornamental plant

Uses: The leaves are used to treat ringworm infections. Decoction of the leaves and flowers are used as expectorant, astringent and mouth-wash in stomatitis.

Threat & damage: Senna can invade forests, forest edges, humid ravines, riverbanks, woodlands and grasslands. It can form dense thickets and shade out most native plants. The plant is particularly aggressive in areas where there is a high water table.

Senna auriculata (L.) Roxb.



Synonym: *Cassia auriculata* L.

Family: Fabaceae - Caesalpinioideae

Local name (Dhivehi): Ranauraa

English name: Tanner's Cassia

Description: Shrubs, branchlets pubescent. Leaves paripinnate, leaflets 8-15, to 2×1 cm, oblong-obovate or elliptic, shortly acuminate, pubescent, gland opposite the leaflets, stipitate; petiole 1-1.5 cm, stipules 1 cm, lunate, auricled. Corymbs axillary and terminal; peduncle, ca. 2 cm, pubescent; flowers yellow. Larger sepals 1.5×1 cm, broadly ovate, obtuse, outer smaller. Petals 3-3.5×2 cm, ovate, orbicular, clawed. Stamens 7 fertile and 3 staminodes. Pod flat, pubescent, mucronate.

Flowering & fruiting: Throughout the year

Native range: Sri Lanka, India, Myanmar

Distribution: Cultivated widely in the tropics

Occurrence in Maldives: Fairly common in open areas

Uses: The plant has good ornamental value. The root is used against fever, diabetes, constipation and diseases of the urinary system. The dried flowers and flower buds are reported to have antidiabetic properties. The powdered seed is useful in chronic purulent conjunctivitis.



Senna occidentalis (L.) Link



Synonym: *Cassia occidentalis* L.

Family: Fabaceae - Caesalpinioideae

Local names (Dhivehi): Dhiguthiyara, Dhikathiri

English names: Coffee-senna, Stinking wood, Septic weed

Description: Erect subshrubs. Leaves up to 22 cm long; leaflets 4-5 pairs, 2.5-7 × 1.5-3.5 cm, ovate-lanceolate, apex acute or acuminate, base rounded; rachis to 18 cm long with a sessile, hemispherical gland at base; stipules 4-7 mm long, linear-lanceolate, acuminate, caducous. Flowers ca. 2 cm across, in terminal and axillary racemes, to 3 cm long; pedicels 0.8-1.2 cm long; bracts linear-lanceolate. Sepals 6-10 mm long, ovate, obtuse, mucronate. Petals 5, yellow, 1-1.5 cm long, obovate. Stamens 10, unequal, only 7 fertile. Pods 5-9 × 0.6-0.8 cm, linear, compressed; seeds 20-25, 4-5 × 3-4 mm, ovate or suborbicular, compressed, brown.

Flowering & fruiting: July - December

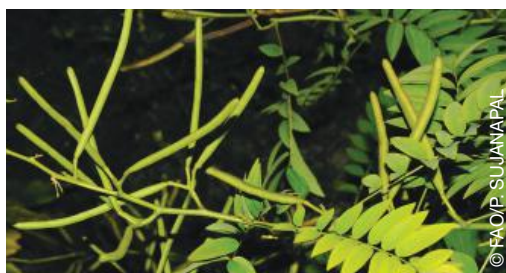
Native range: Tropical America

Distribution: Pantropical

Occurrence in Maldives: Fairly common in open areas

Uses: The roots are a remedy for diabetes, inflammation, ring worm, colic, flatulence, dyspepsia, epilepsy, scorpion sting and convulsions. The leaves and seeds are used to treat leprosy, erysipelas, ulcers, cough, bronchitis, hiccough, asthma and hydrophobia.

Threat & damage: The plant is an invasive species. Its spread in Maldives need be monitored and appropriate management measures adopted should it become a problem.



Senna sophera (L.) Roxb.



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Synonyms: *Cassia sophera* L., *Cassia atroviridis* Span.

Family: Fabaceae - Caesalpinioideae

Local name (Dhivehi): Boavaththiyara

English name: Pepper leaved Senna

Description: Shrubs or subshrubs. Leaves 15-22 cm long; leaflets 6-10 pairs, 2.5-6 × 1-2.5 cm, lanceolate, base rounded, apex acute or acuminate; rachis bearing a clavate gland at base; stipules ca. 6 mm long, ovate, caducous. Inflorescence axillary or terminal, 4-10 flowered, corymbose raceme. Flowers yellow; pedicels 0.8-1.4 cm long; bracts 4-5 mm long, ovate-acute. Sepals 5-6 mm long, ovate-obtuse. Petals yellow, 1-1.5 cm long, orbicular to obovate, obtuse. Stamens 10, the 3 lower with longer filaments. Pods 5-8

× 0.5-0.9 cm, linear-oblong, compressed; seeds ca. 4 × 3.5 mm, suborbicular, compressed, brownish.

Flowering & fruiting: November-February

Native range: Probably India

Distribution: Pantropical

Occurrence in Maldives: Occasional in open areas

Uses: The leaf juice is given internally as an expectorant for cough, asthma and hiccup. Bark infusion or the powdered seeds mixed with honey are given for diabetes. Root bark is known for its efficacy in treating respiratory disorders. The plant is used as a remedy for pityriasis, psoriasis, asthma, acute bronchitis, cough, diabetes and convulsions in children.

Senna surattensis (Burm. f.) Irwin & Barneby



Synonyms: *Cassia surattensis* Burm. f., *Cassia glauca* Lam.

Family: Fabaceae - Caesalpinioideae

Local name (Dhivehi): Ranuwia

English names: Golden senna, Glaucous Cassia, Scrambled egg bush

Description: Shrubs. Leaves alternate, rachis 8-20 cm long, ribbed; leaflets 6-10 pairs, 2-5 × 0.8-2 cm, elliptic or obovate-oblong, obtuse at apex, oblique at base, discolourous, secondary veins 6-9 pairs; petioles 2-4 cm long; stipules up to 1.5 cm long, linear-ensiform, inflexed, pubescent, subpersistent. Glands between lower 1 to 3 pairs of leaflets. Racemes 5 to 20-flowered, in the axils of upper leaves, corymbose; peduncles 2.5-8 cm long; pedicels 1.5-2.5 cm long. Sepals obtuse, outer 2 half the length of inner ones. Petals 0.8-2.5 cm long, yellow. Stamens 10, subequal. Ovary stipitate, silky hairy; style 1.5-3 mm long. Pods 4-10 × 0.8-1.8 cm, strap-shaped, flat, septate, dark brown; seeds 10-13, brown, 5-7 × 2.5-4 mm, oblong, blackish, shiny.

Flowering & fruiting: Throughout the year

Native range: Indo-Malaysia and Australia

Distribution: Asia, Africa, North and Central America and part of Oceania

Occurrence in Maldives: Occasional in open areas

Uses: Young leaves are cooked and eaten as vegetable. A decoction of the root is used against gonorrhoea. Leaves are used in the treatment of dysentery and the flowers are a purgative.

Threat & damage: The plant is an invasive species in most of the Asia-Pacific countries. It has the potential to become invasive in Maldives.



Senna tora (L.) Roxb.



Synonyms: *Cassia tora* L., *Cassia borneensis* Miq.

Family: Fabaceae - Caesalpinioideae

Local name (Dhivehi): Vaththiyara

English names: Foetid Cassia, Ring worm plant, Sickle senna

Description: Annual subshrubs. Leaves pinnate, to 15 cm long, leaflets 2-4 pairs, 1.5-4.5 × 1.5-2.5 cm, cylindric gland on the rachis between the leaflets of the lower 2 pairs; obovate-oblong, apex obtuse, base oblique, pubescent below; stipules linear. Flowers ca. 1.5 cm across, in few-flowered axillary racemes. Sepals 5. Petals 5, yellow, 8-12 mm long, obovate-obtuse. Stamens 10, unequal, only 7 fertile. Ovary subsessile, pubescent; ovules numerous. Pods 8-14 × 0.3-0.6 cm, linear, subtetragonous, septate between seeds; seeds 20-30, compressed, oblong, brown.

Flowering & fruiting: August - January

Native range: South America

Distribution: Throughout the tropics

Occurrence in Maldives: Fairly common in open areas

Uses: The tender shoots and leaves are good vegetables. The leaves and seeds are useful in leprosy, ringworm, flatulence, colic, constipation, cough and cardiac disorders. The plant is used as a natural pesticide and its powder is most commonly used in the pet food industry.



Sesbania grandiflora (L.) Pers.



Synonyms: *Agati coccinea* (L. f.) Desv., *Robinia grandiflora* L.

Family: Fabaceae - Papilionoideae

Local name (Dhivehi): Feerumuranga

English names: Basna, Humming bird tree, Sesban

Description: Small trees; branchlets terete, pubescent. Leaves paripinnate, alternate, 18-30 cm long; leaflets 12-25 pairs, 1.5-3.5 × 0.6-1.2 cm, oblong, base rounded, apex obtuse, emarginate, glabrous to appressed-pubescent on both surfaces. Flowers in axillary, raceme, to 8 cm long, lax, 2-4 flowered. Flowers 7.5-10 cm long, pendulous; pedicels to 2 cm long.

Calyx 2-3 cm long, campanulate; lobes triangular. Corolla pink or white, 7.5-10 cm long; standard to 10 × 6 cm, reflexed. Stamens diadelphous 9+1; anthers uniform, dorsifixed. Pods 30-40 cm long, 5-8 mm wide, slender, falcate or straight; seeds ca. 30, reddish brown.

Flowering & fruiting: June – September

Native range: Tropical Asia to Australia

Distribution: Widespread in humid tropical regions of the World

Occurrence in Maldives: In homesteads

Uses: Leaves, flowers and fruits are all used as vegetable. The plant is a good source of fodder especially during drought.



Sesbania sericea (Willd.) Link



Synonyms: *Agati sericea* (Willd.) Hitchc., *Coronilla sericea* Willd.

Family: Fabaceae - Papilionoideae

Local name (Dhivehi): Kathurumurang

English names: Silky sesban, Papagayo

Description: Annual or biennial subshrubs, pubescent silky when young; angles of stems often with minute prickles. Leaves pinnate, leaf-rachis 10-15 cm long; leaflets 20-25 pairs, to 20 × 4 mm; stipules ligulate-lanceolate, erect, caducous. Racemes axillary, 2-6-flowered, rachis, to 5 cm long, softly silky pilose; pedicels sparsely pilose, to 5 mm long. Calyx glabrous. Standard petal yellow with a few flecks of violet, cordate at base, 8-10 × 6 mm, emarginate; wing petals 5-6 × 3-3.5 mm, claw 2.5 mm; keel petals 3 mm long, incurved, 4-5 mm wide, the basal tooth obscure, claw 4-5 mm long. Stamens diadelphous; filament-sheath 6-8 mm, free parts incurved, 2-3 mm; anthers 0.4 mm long. Ovary glabrous; style glabrous, 2 mm long. Pod straight or slightly curved, not torulose, to 15 cm long; seeds 15-30, brown.

Flowering & fruiting: December - June

Native range: Tropical Africa, the Arabian Peninsula and Southeast Asia

Distribution: Widely distributed in the tropical and subtropical areas

Occurrence in Maldives: Fairly common in wetland areas

Uses: Used as green manure and animal fodder. As a nitrogen fixer, it is also planted for soil improvement. The seeds are used to produce a natural gum and resin, useful to treat skin diseases. Gum from the endosperm produces a smooth, light colored, coherent and elastic film used for sizing textiles, paper products and for thickening and stabilizing solutions.

Threat & damage: The plant can grow in dense thickets and displace native vegetation and wildlife



Sesuvium portulacastrum (L.) L.



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Synonyms: *Portulaca portulacastrum* L., *Trianthema polyandra* Blume

Family: Aizoaceae

Local name (Dhivehi): Lonumagoo

English names: Shoreline purslane, sea purslane

Description: Succulent, perennial herbs; stems prostrate, creeping, much-branched, greenish-red, rooting at nodes. Leaves opposite, 2-6 × 0.5 - 1.5 cm, oblanceolate or spatulate, glabrous, fleshy, rounded at apex, narrowed towards base. Flowers axillary, solitary or clustered, 5- 8 mm long, pinkish-violet or purple. Capsules included in perianth; seeds many, black, reniform, smooth with long funicles.

Flowering & fruiting: November- December

Native range: Africa, Asia, Australia and America

Distribution: Pantropical

Occurrence in Maldives: Occasional on sandy seashores

Uses: Used as a vegetable to prepare salads and similar items. It is also grown as an ornamental and as a ground cover to prevent erosion in dune vegetation. In traditional medicine, the plant is used as a haemostatic and to treat various infections and kidney problems.



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Sida acuta Burm .f.



Synonym: *Sida stipulata* Cav.

Family: Malvaceae

Local name (Dhivehi): Veyo dhiggaa

English name: Horn bean leaved sida

Description: Erect subshrubs, branches distichous. Leaves simple, alternate, 3-6 × 1-2 cm, lanceolate to ovate, apex acute or acuminate, base truncate, margins serrate, entire towards base, sparsely hirsute to glabrate on both surfaces; 3-nerved at base; petiole to 4 mm long; stipules 5-8 × 1-1.5 mm, unequal, one lanceolate, the other linear. Flowers solitary, axillary; pedicels to 5 mm long. Calyx 6-8 mm long, campanulate, ciliate on margins, divided to the middle. Petals creamy-yellow, 6-8 mm long, obliquely obovate. Staminal column ca. 2 mm long; filaments to 1.5 mm long; anthers pale yellow. Ovary ca. 1.5 mm long, ovoid; styles 6-8; stigma globose, yellow. Schizocarp to 5 mm long; mericarps 6-8, ca. 3 × 2 mm, trigonous, reticulate, apically 2-awned; seeds ca. 2 mm long, trigonous.

Flowering & fruiting: August- October

Native range: Central America

Distribution: Pantropical

Occurrence in Maldives: Common in human habited areas

Uses: The plant can accumulate heavy metals and may be useful for phytoremediation of contaminated soils. The root is stomachic, diaphoretic and antipyretic, useful in febrile affection and some forms of dyspepsia, and in mild cases of debility from previous illness. The drug is used as a diuretic in rheumatic affection and is a demulcent in chronic dysentery.

Threat & damage: Sida is a noxious weed in the tropics and sub-tropics. It can compete with native plants for water and nutrients and suppress their growth. The strong tap root system helps to withstand adverse climatic conditions.

Management: Slashing and mowing before flowering and fruiting are effective. Herbicides are effective in the short-term. The efficacy of *Fusarium lateritium*, a biocontrol agent, has been proved in some countries.

Sida rhombifolia L.



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Synonyms: *Sida insularis* Hatus., *Sida rhomboidea* Roxb. ex Fleming

Family: Malvaceae

Local name (Dhivehi): Maa dhigga

English names: Broomjute sida, Arrowleaf sida

Description: Woody subshrubs; branchlets brown, stellate pubescent. Leaves 2-5 × 1.5-3.5 cm, rhomboid, apex acute, base obtuse or cuneate, margins serrate above the upper half, lower side tomentose; petiole 0.5 to 1 cm, stipule to 1 cm, linear. Flowers axillary, solitary or in clusters, yellow; pedicels to 6 mm, tomentose. Calyx broadly campanulate, lobes triangular, to 3 mm, tomentose outside. Petals 9 × 5 mm,

obovate. Schizocarp enclosed in calyx, semiorbicular, 3 mm long; mericarps 8-10, awned at apex, to 1 mm.

Flowering & fruiting: September- December

Native range: New World tropics and subtropics

Distribution: Pantropical

Occurrence in Maldives: Occasional in open areas

Uses: The stem composed of high quality fibre is used as cordage and for making brooms. The root is used to treat rheumatism, the leaves to relieve swelling and the fruit is a remedy for headache. The roots are also used as a remedy for diarrhea, tuberculosis, leucorrhea, strangury, burning sensation and dipsia.



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Sonneratia caseolaris (L.) Engl.



Synonyms: *Rhizophora caseolaris* L., *Sonneratia acida* L. f.

Family: Sonneratiaceae

Local name (Dhivehi): Kulha

English name: Red apple mangrove

Description: Trees to 25 m high, bark fissured; pneumatophores to 50×6 cm, straight, stout, corky, brownish grey or orange-coloured, outer layer flaky; bark brown, cracked; branchlets angled, nodes swollen with 2 lateral pair of circular glands. Leaves simple, opposite-decussate, 4-11×3.5-6.5 cm, broadly ovate or broadly elliptic, base cuneate, apex mucronate, emarginate or obtuse, thick, slightly fleshy, green; lateral veins looped near the margin; petiole stout, red. Flowers pink, to 6×5-7 cm, terminal, solitary; pedicel quadrangular. Calyx green outside, white within. Petals 6, free, purple to violet red, membranous, cauducous. Stamens many, free, inflexed in bud, cauducous; filaments reddish below, white above, thread like, anthers reniform, bilobed. Style coiled in bud, to 6 cm. Fruit a drupe, to 7 cm across, globose, slightly flattened, pericarp smooth; seeds many, embedded in the fleshy pulp of

the placenta, angular with rough surface.

Flowering & fruiting: Throughout the year

Native range: Asia-Pacific

Distribution: Indo-Malaysia and Australia

Occurrence in Maldives: Common in some of the northern islands

Uses: The wood is heavy and used for boat building and other construction purposes. The pneumatophores are good as corks or floats for fishing nets. The leaves are used as fodder. Young fruits are widely used in chutneys and curries. Ripe fruits, said to taste like cheese, are eaten raw or cooked. A clear jelly is prepared from the fruits. Fruits are also used to make vinegar. The plant is a folk remedy for sprains and worms.



Spathodea campanulata P. Beauv.



Synonym: *Bignonia tulipifera* Thonn.

Family: Bignoniaceae

Local name (Dhivehi): Hirunduni

English names: Scarlet-bell tree, Fountain tree, African tulip tree

Description: Medium-sized trees; bark smooth. Leaves imparipinnate, opposite; rachis 9-40 cm long, swollen at base; leaflets 9-19, opposite; petiolule 3-5 mm long; lamina 5-12.5×3-7 cm, elliptic-oblong or obovate-oblong, base round or oblique, apex acuminate, puberulent beneath, a prominent gland at the base of the lamina on the upper side. Flowers to 8 cm long, bright red, in terminal racemes. Calyx 5-6×2-2.5 cm, spathaceous, golden velutinous. Corolla tube 7.5-9×5-6 cm. Stamens subequal, unequally inserted at the base of the tube. Disc 4×8 mm, shallowly lobed. Fruit a capsule, 15-23×3-5 cm, lanceolate-oblong, brownish-black, woody, 2-valved; seeds many, 1.7-2.4 cm across, winged.

Flowering & fruiting: October - May

Native range: West Africa

Distribution: Widely planted in the tropics and subtropics

Occurrence in Maldives: Planted as avenue tree

Uses: The seeds are edible. Timber is soft and used to make paper and blacksmith's bellows. The bark and leaves are used in traditional medicine. The wood is resistant to fire and is good for landscaping in fire-prone areas.

Threat & damage: It is ranked as one among the 100 worst invaders in the world. The tree is capable of smothering other vegetation by its gregarious growth.

Management: Pulling out seedlings and young trees is effective. Basal bark or cut-stump application with herbicides is proved efficient in killing large trees.



Spermacoce hispida L.



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Synonyms: *Spermacoce avana* R.Br. ex G. Don, *Spermacoce mutilata* Blanco

Family: Rubiaceae

Local name (Dhivehi): Bulhaani hui

English names: Spermacoce, Shaggy button weed

Description: Erect herbs, hispid. Leaves 1-2 × 0.8-1.5 cm, oblong-elliptic to obovate, acute at apex, attenuate at base, hispid on both sides; stipules sheathing. Flowers in axillary verticillate cymes. Calyx tube 0.15-0.2 cm long, ovoid, hispid without; lobes 4, obovate. Corolla pinkish white; tube slender, 0.5-0.6 cm long, hairy at throat; lobes 4. Capsule subglobose, 0.2-0.25 cm diam, hispid without; seeds 2, 0.1-0.15 cm long, grooved; septum detaching from coccus.

Flowering & fruiting: May- August

Native range: Southern China, India, Malaysia, Indonesia and Philippines

Distribution: South and Southeast Asia

Occurrence in Maldives: Common in farming areas.

Uses: The plant is emetic and the aerial part is taken as a febrifuge. The seeds are useful in the treatment of diarrhea. The leaves are applied in poultices to treat headaches and wounds. The roots are dried and powdered and given along with cow milk for conditions like urinary infections and oligurea.



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Sphagneticola calendulacea (L.) Pruski



Synonyms: *Verbesina calendulacea* L.,
Wedelia chinensis (Osbeck) Merr.

Family: Asteraceae/Compositae

Local name (Dhivehi): Kudhimerihi

English name: Chinese wedelia

Description: Procumbent herbs, rooting at lower nodes. Leaves 2-6×0.5-1.5 cm, spathulate-oblongate, acute, trinerved, attenuate, shortly appressed hairy on both the surfaces. Heads 5-7 mm across, yellow, solitary on terminal 3-7 cm long peduncles. Involucral bracts in 2 series; outer oblong; inner lanceolate, 5-7×1-2.5 mm. Ray florets few; corolla 6-8×3-4 mm long. Achenes dark brown, 4-5×2-3 mm, rugulose; those of ray florets triquetrous; and of disc florets compressed. Pappus minute, irregularly margined.

Flowering & fruiting: Throughout the year

Native range: Indo-Malaysia

Distribution: Pantropical

Occurrence in Maldives: Occasional along the marshy areas

Uses: The leaves are considered useful against coughs, cephalalgia, skin diseases and alopecia. The seeds, flowers and leaves are used as deobstruent.



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Sphagneticola trilobata (L.) Pruski



Synonyms: *Silphium trilobatum* L., *Wedelia trilobata* A.St.-Hil.

Family: Asteraceae / Compositae

Local name (Dhivehi): Valu Mirihi

English name: Singapore daisy

Description: Perennial herbs, stem prostrate, diffuse, rooting at nodes. Leaves 3-10 × 3-7 cm, elliptic-obovate, usually with 3 angular lobes with toothed margins, acute at apex, basally cuneate, glabrous to sparingly pubescent; petiole short, upto 5 mm. Heads radiate, 2-2.5 cm across, solitary on ebracteate 4-15 cm long peduncles. Involucre green; bracts lanceolate, 1-1.5 cm long, ciliate; inner narrower. Ray florets 5-8; corolla bright yellow, 1.5-2.0 × 0.5-0.7 cm, 3-4 denticulate; tube short. Ovary trigonous; stigma bilobed. Pappus connate into a spathiform, fimbriate cup at the apex, devoid of awns. Disc florets many; corolla yellow; tube 5-8 mm long, 5-lobed; lobes deltoid, densely pubescent within. Achenes blackish, warty, 4-6 mm long, crowned by the persistent pappus cup.

Flowering & fruiting: June - September

Native range: Tropical America

Distribution: Widespread and naturalised in the tropics

Occurrence in Maldives: Common in open areas

Uses: The plant is an ornamental which forms an excellent ground cover. It is used against bronchitis, cold, abdominal pain and dysmenorrhea.

Threat & damage: The plant has been listed by Global Invasive Species Database as one among the 100 worst invaders in the world. The plant can spread fast, crowd out and prevent regeneration of native species. It is very toxic to animals.

Management: The plant can be effectively controlled by removing it along with the top few centimetres of soil so as to remove the soil seed bank. Hand pulling in conjunction with herbicide application may be a good strategy. Burning can be practised but its efficacy is unknown.

Spigelia anthelmia L.



Synonyms: *Spigelia fruticulosa* Lam., *Spigelia nervosa* Steud.

Family: Loganiaceae

Local name (Dhivehi): Valu kafa

English names: Pink root, Spigelia, Maryland pink

Description: Annual herbs. Leaves opposite, decussate, upper ones often verticillate, 3-12 × 1-5 cm, ovate lanceolate, decurrent at base, acuminate at apex, scabrid above; lateral nerves 5-8 pairs, the basal pair sessile; stipules inter-petiole, ovate, obtuse. Flowers in monochasial, trichotomous, terminal and axillary, up to 12 cm long cymes. Calyx 5-lobed, lobes unequal, 2.5-4 cm long, linear lanceolate. Corolla pink, tube ca. 1 cm long; lobes 5, ovate-acute, 1.5 mm long. Stamens 5, included within the corolla tube, filaments appendaged at the middle. Ovary sub-globose, bilocular; ovules 6-8 per locule; style terminal, 2 mm

long, stigma ovate. Capsule sub-globose, with persistent style, 2-lobed, ca. 5-6 mm, papillose; seeds pyriform, rugose, brown to black.

Flowering & fruiting: June-August

Native range: West Indies and South America

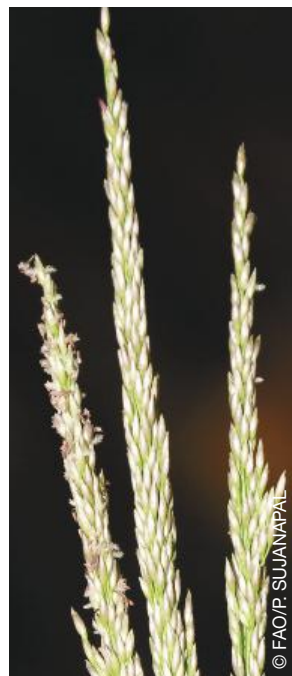
Distribution: Naturalized in Africa, South Asia and Australia

Occurrence in Maldives: Common in open areas

Uses: This is an important species in homeopathic system of medicine, used to cure heart diseases, headaches, neuralgia, migraines as well as inflammation of the iris. It is also designated to treat neuralgia of the trigeminal nerve and toothache caused by smoking tobacco.

Threat & damage: The plant can form dense thickets and smother native vegetation.

Sporobolus virginicus (L.) Kunth



Synonyms: *Agrostis virginica* L., *Zoysia tremula* (Willd.) B.D.Jacks.

Family: Poaceae/Gramineae

Local name (Dhivehi): Boaonuhiri

English names: Marine couch, Sand couch, Salt-water couch

Description: Perennials; culms stoloniferous, creeping and spreading by long, slender rhizomes, 15-60 cm long; nodes glabrous. Leaves 4-18×0.3-0.6 cm, lanceolate, base rounded, apex acuminate, inrolled; sheaths to 5 cm long; ligule a row of hairs. Panicles 5-12.5 cm long, narrow, somewhat appressed to rachis. Spikelets ca. 2 mm long, lanceolate. Lower glume lanceolate. Upper glume ovate-lanceolate. Lemma lanceolate. Palea elliptic, delicate. Stamens 3; anthers brownish. Stigmas white.

Flowering & fruiting: July – September

Native range: Western Australia

Distribution: The tropics and subtropics

Occurrence in Maldives: Common along the water logged areas of coastal region

Uses: A decoction of the plant is taken for urinary irritation and kidney complaints. The grass is regarded as nutritious forage for cattle.



Stachytarpheta jamaicensis (L.) Vahl



Synonyms: *Abena jamaicensis* (L.) Hitchc.,
Verbena jamaicensis L.

Family: Verbenaceae

Local name (Dhivehi): Rakimaa

English name: Jamaica vervain

Description: Woody subshrubs; branches subtertragonous. Leaves 3.5-7×2-4 cm, obovate, base cuneate and decurrent on petiole, margin coarsely crenate-serrate, apex obtuse or rounded; petiole to 2 cm long. Spikes terminal, 10-25 cm long, ca. 4 mm across. Bracts ca. 7 mm long. Calyx ca. 6 mm long, 4-toothed, puberulous. Corolla hypocrateriform, bluish-pink; tube 8-10 mm long, slightly curved; limb ca. 8 mm across. Style included. Fruit ca. 5 mm long, oblong.

Flowering & fruiting: June - December

Native range: Tropical America

Distribution: Pantropical

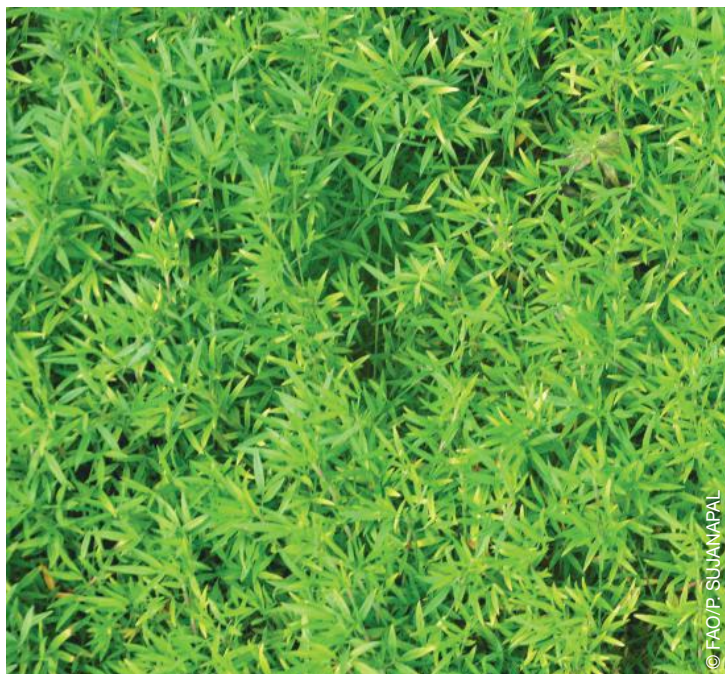
Occurrence in Maldives: Common in most of the islands

Uses: A minor ornamental plant. The decoction of the plant is useful in the treatment of diabetes, allergies, stomach pains, coughs and fever. It is also used to expel intestinal worms, increase perspiration and promote menstruation.



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Stylosanthes guianensis (Aubl.) Sw.



Synonyms: *Stylosanthes gracilis* Kunth., *Trifolium guianensis* Aubl.

Family: Fabaceae - Papilionoideae

Local name (Dhivehi): Kudhimugu

English names: Brazilian stylo, Brazilian lucerne stylo

Description: Sub-erect perennial herbs, stem highly branched. Leaves trifoliolate, leaflets 0.5-4.5 × 2 cm, elliptic to lanceolate, acute at both ends, villous below, nerves prominent. Inflorescence a condensed spike, flowers yellow to orange with black or red stripes. Calyx lobes 2-4 mm long, hairy. Petals yellow, 4-6 mm long. Stamens monadelphous. Pod one-seeded, 2-3 × 1.5-2.5 mm; seed small, pale brown or purple in colour.

Flowering & fruiting: July - January

Native range: South America

Distribution: Widespread in the tropics and subtropics

Occurrence in Maldives: Common in open areas, especially in inhabited islands

Uses: The plant is used as a long and short-term pasture and ground cover in orchards. It is also useful as green manure.



Suriana maritima L.



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Synonym: *Suriana volubilis* Dombrain & Cav.

Family: Surianaceae

Local name (Dhivehi): Halaveli

English name: Bay cedar

Description: Stout shrubs or small trees. Leaves simple, alternate, sessile, to 4×2 cm, spatulate, apex obtuse, base cuneate, margin entire, pubescent. Flowers axillary, solitary, yellow. Sepal 5, green, pubescent. Corolla 5, bright yellow. Stamens 5 or 10 fertile, staminodes 5, Ovary 5, superior; locule 1. Fruit a schizocarp; seeds 4, black.

Flowering & fruiting: July –February

Native range: Florida, USA

Distribution: Pantropical

Occurrence in Maldives: Very common in coastal habitats

Uses: The plant is used as a hedge or border plant in its native range. The leaves are used to treat sore throats and toothaches and for strengthening the teeth.



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Swietenia macrophylla King



Synonyms: *Swietenia belizensis* Lundell, *Swietenia candollei* Pittier

Family: Meliaceae

Local name (Dhivehi): Dharu gas

English name: Big-leaf mahogany

Description: Deciduous trees, to 25 m high; bark brown. Leaves paripinnate, alternate, estipulate; rachis 5-13 cm long; leaflets 4-10, opposite or subopposite; petiolule 3-4 mm long; lamina 5.5-12 × 2.5-4.5 cm, obliquely ovate-lanceolate, oblong-lanceolate or falcate; base oblique, apex acuminate, shining above, coriaceous; lateral nerves 7-12 pairs, pinnate, prominent, intercostae reticulate. Flowers pale yellow, to 8 mm across, in axillary panicles to 10 cm. Calyx lobes 5, suborbicular. Petals 5, to 4 mm, oblong. Disc annular. Staminal tube 3.5-4 mm, apically 10-lobed; stamens 10. Ovary superior, 5-celled, ovules many; stigma some what lobed. Fruit a capsule, 8.5 × 6.5 cm, oblong-globose, 5-valved, woody, rusty out side; seeds many, to 6 cm, winged.

Flowering & fruiting: April – March

Native range: Central America

Distribution: In its native range and in several countries in the Asia-Pacific where it was introduced

Occurrence in Maldives: Planted in some of the islands

Uses: The quality wood has a wide variety of uses. The plant extracts are known to have antibacterial and antifungal activities. The seed has significant anti-diabetic property.

Threat: An invasive tree in some countries of Southeast Asia. It is a serious invader in the natural forests in the Philippines.



Synedrella nodiflora (L.) Gaertn.



Synonyms: *Verbesina nodiflora* L., *Wedelia cryptocephala* Peter

Family: Asteraceae / Compositae

Local name (Dhivehi): Nithubadi

English name: Synedrella

Description: Erect herbs; stem adpressed, hairy. Leaves simple, opposite, 4-8 × 2-4 cm, elliptic-ovate, apex acute, base cuneate to truncate, narrowly winged on the petiole, margin serrate, scabrous on both sides, basally 3-nerved; petiole to 3 cm. Heads solitary, sessile, axillary and terminal, few-flowered, 0.5-1 cm across, radiate. Phyllaries 2-seriate; outer foliaceous, inner paleaceous. Flowers heterogamous, yellow. Ray flowers: female; corolla tube 2-2.5 mm long; ligule 1-2 mm long, 2-3-lobed; ovary 3 mm long, oblong, winged; style-arms acute. Disc flowers: bisexual; corolla tube 2-3 mm long, lobes 5; stamens 5, included, ovary 2-3 mm long; achenes 3-4 mm long, dimorphic; of ray florets dorsally compressed, with lacerate wings; of disc florets trigonous, not winged, with 2 or 3 rigid awns.

Flowering & fruiting: Throughout the year

Native range: Tropical America

Distribution: Widespread in the tropics and subtropics

Occurrence in Maldives: Common in open areas

Uses: Young shoots are used as vegetable and the shoots are fed to cattle. Crushed leaves are used in the treatment of rheumatism.



Syzygium aqueum (Burm. f.) Alston



Synonym: *Eugenia aquea* Burm. f.

Family: Myrtaceae

Local name (Dhivehi): Jan buroalu

English names: Bell fruit, Watery rose-apple.

Description: Small trees; branchlets first bluntly quadrangular. Leaves simple, opposite, 4.5-23 × 1.5-11 cm, elliptic-obovate, obovate or elliptic-oblong, base cuneate, subcordate or obtuse, apex obtuse, obtusely acuminate, acuminate or subretuse, coriaceous; lateral nerves 9-14 pairs, parallel, looped near the margin and forming intramarginal nerve; petiole 1-5 mm long. Flowers bisexual, white or pinkish-white, in terminal or subterminal axillary cymes, subsessile. Calyx tube 1.5-3 cm long, funnel shaped; lobes 5, 6 mm long, ovate. Petals 5, 12 × 8 mm, oblong, obtuse, concave. Stamens many, inflexed in bud, 1.5 cm long; filaments white or pink. Fruit a berry, 2 cm across, globose, pinkish or red.

Flowering & fruiting: December – June

Native range: Tropical Asia

Distribution: Widely cultivated in the tropics

Occurrence in Maldives: Cultivated in homesteads

Uses: Fruits are edible. In traditional medicine, the fruit salad is a ceremonial dish for new mothers. The wood is hard and suitable for handicrafts. The leaves and fruits possess antibiotic properties and also used for the treatment of malaria and pneumonia. An infusion of the leaves is used in the treatment of stomach aches and dysentery.



Syzygium cumini (L.) Skeels



Synonyms: *Eugenia jambolana* Lam., *Myrtus cumini* L., *Syzygium jambolanum* (Lam.) DC.

Family: Myrtaceae

Local name (Dhivehi): Dhanbu gas

English names: Black plum, Jambol, Java plum

Description: Evergreen trees, to 30 m high, bole often crooked, bark 8-10 mm thick, light grey, mottled with dark grey, rough. Leaves simple, opposite, 7.5-18 × 2.5-8 cm, elliptic, ovate-lanceolate, elliptic-ovate or ovate-ovate, base acute, apex acuminate, minutely punctate; lateral nerves many, parallel, close; petiole 10-25 mm long. Flowers 1 cm across, greenish-white, sessile, in compound trichotomous cymes from leafless nodes, sometimes terminal and axillary. Calyx tube 2 × 3 mm, turbinate; lobes 4, obscure. Petals 4, calyptrate. Stamens many, 2-5 mm long. Fruit a berry, oblong or globose, black with pink mesocarp.

Flowering & fruiting: December – April

Native range: India, Sri Lanka and Myanmar

Distribution: Asia, Africa, South, Central and North America and Oceania

Occurrence in Maldives: Common in homesteads in most of the islands

Uses: A multipurpose tree suitable for avenue planting, timber and as a source of edible fruits and medicine. The timber is hard and used for construction purposes. The bark is sweet, carminative, diuretic, digestive, anthelmintic and stomachic. Juice of the leaves is given for dysentery. The fruits are a remedy for diarrhea, splenopathy, urethrorrhea and ringworm.

Threat & damage: The tree is reported to be invasive in Florida (USA), South Africa and in several Pacific Islands. It can form a dense cover and prevent regeneration of native species.



Syzygium jambos (L.) Alston



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Synonym: *Eugenia jambos* L.

Family: Myrtaceae

Local name (Dhivehi): Jambu

English names: Malabar plum, Rose apple

Description: Evergreen trees, to 15 m high, branchlets terete, glabrous. Leaves simple, opposite, decussate, 10-18 × 2.5-5.5 cm, elliptic or elliptic-lanceolate, base acute, obtuse or cuneate, apex acute or acuminate; lateral nerves 10-16 pairs, pinnate, prominent, arched towards the margin forming intra marginal nerves; petiole 7-10 mm long. Flowers bisexual, white, to 6 cm across in terminal cymes to 10 cm; pedicel to 2 cm. Calyx tube 1.5 cm, turbinate; lobes 4, 8 × 6 mm, ovate-orbicular, subequal, persistent. Petals 4, 1.5 × 1.8 cm, free, concave, orbicular; disc thick, lining the calyx. Stamens many; filaments exserted. Ovary inferior, 2-celled, ovules many. Fruit a berry, to 3 × 2.5 cm, white or pink, oblong; seeds brown.

Flowering & fruiting: October – January

Native range: Southeast Asia

Distribution: Pantropical

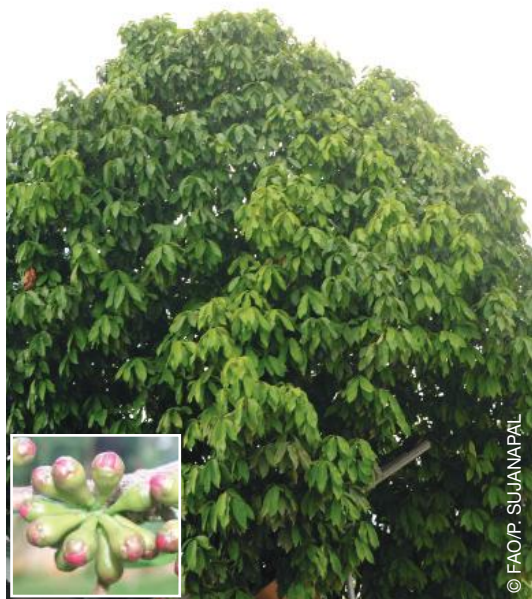
Occurrence in Maldives: In homesteads

Uses: Planted as an avenue tree and for its edible fruits. The wood is useful in small scale constructions. The fruit is used as a tonic for the brain and liver and the seeds as a remedy for dysentery and catarrh. Bark is used to treat asthma, bronchitis and hoarseness.



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Syzygium malaccense (L) Merr. & Perry



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Synonyms: *Eugenia malaccensis* L., *Eugenia purpurascens* Baill.

Family: Myrtaceae

Local name (Dhivehi): Maa janbu

English names: Pomarosa, Macopa, Malay apple

Description: Evergreen trees, to 15 m high; bark grey-brown, smooth; branchlets terete-compressed. Leaves simple, opposite, 16-34 × 5-13 cm, elliptic; base cuneate, coriaceous, gland dotted; lateral nerves 10-15 pairs, pinnate, slender, prominent, looped near the margin forming intramarginal nerves, intercostae reticulate, prominent; petiole 8-15 mm, stout, grooved above. Flowers bisexual, large. Calyx tube 1.5 cm; lobes round, unequal. Petals large, glandular, suborbicular. Staminal filaments red, 2 cm, many, bent inwards in middle when in bud. Ovary 2-celled; ovules many; style long. Fruit a berry, large, to 5 × 3 cm.

Flowering & fruiting: February- June

Native range: Malaysia, Indonesia, Vietnam, Thailand, New Guinea and Australia

Distribution: Cultivated throughout the topics

Occurrence in Maldives: Common in homesteads

Uses: Fruits are edible. Pounded bark is used as a remedy for mouth lesions and lacerations. The root acts as a diuretic and is given to alleviate oedema. The root bark is useful against dysentery and serves as an emmenagogue and abortifacient.



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Syzygium samarangense (Blume) Merr. & L. M. Perry



Synonyms: *Eugenia javanica* Lam., *Myrtus samarangensis* Blume

Family: Myrtaceae

Local name (Dhivehi): Jambu gas

English names: Java apple, Wax apple, Bell apple

Description: Evergreen trees, to 15 m tall, bark smooth, greyish. Leaves opposite, subsessile, to 20 × 8 cm, broadly lanceolate or ovate, base cordate, apex acuminate, punctuate, secondary nerves many, prominent, looping with intra-marginal nerves. Flowers in drooping panicles at the branch tips or in small clusters in the axils of fallen leaves. Petals 4, white, ovate. Stamens numerous. Fruit with fleshy calyx; seeds 1-2, sometimes seedless.

Flowering & fruiting: February – June

Native range: Malaysia, Andaman and Nicobar Islands

Distribution: Southeast Asia, widely

introduced elsewhere

Occurrence in Maldives: Cultivated in homesteads and gardens. Also planted as avenue tree.

Uses: Fruits are edible. Wood is of moderate quality and used for small scale constructions. Powdered leaves are a remedy for cracked tongue. Fruit is used in cases of fever, diabetes, cough and headaches. The root bark decoction is useful in treating dysentery, amenorrhea and also used as an abortifacient.



Tabebuia rosea (Bertol.) Bertero ex. A. DC.



Synonyms: *Tecoma mexicana* Mart. ex DC., *Tecoma rosea* Bertol.

Family: Bignoniaceae

Local name (Dhivehi): Kunahangaali

English name: Trumpet tree

Description: Medium trees, up to 20 m tall; bark greyish-brown, rough. Leaves opposite, digitately pinnate; leaflets usually 5, often unequal, 5-30 × 2-12 cm, elliptic or oblong lanceolate, acuminate at apex, obtuse to rounded at base; lateral nerves 6-9 pairs, slender; petiolules 1.4-3.5 cm long. Flowers in cymose panicles. Calyx cupular, bilabiate, densely lepidote, 1-2 cm. Corolla pink, glabrous outside, 6-10 cm long and 5-7 cm across, lobes 5, subequal, margins wavy. Stamens included within the corolla tube.

Flowering & fruiting: December- June

Native range: Continental America

Distribution: Pantropical

Occurrence in Maldives: Widely planted as an avenue tree

Uses: The bark is used in treating occurrence of intestinal parasites, malaria and uterine cancer. The decoction of the bark is recommended for anaemia and constipation and that of flowers, leaves and roots to reduce fever, pain, tonsil inflammation and various other disorders. Lapachol, isolated from the tree, has antimalarial effects.



Tacca leontopetaloides (L.) Kuntze



Synonyms: *Leontice leontopetaloides* L., *Tacca artocarpifolia* Seem.

Family: Taccaceae

Local name (Dhivehi): Hiththala

English name: Bat plant

Description: Erect rhizomatous herbs, rhizomes cylindrical to subcylindrical, 15-25 cm in diam. Leaves 1-3, 30-90 cm, 3-partite, broadly obovate, ovate or oblong ovate, segments variously pinnatifid, margins undulate; petioles 30-90 cm long, terete, hollow, striate. Scapes longer than petiole, 10-40 flowered. Flowers pedicelled, arranged in an umbel, drooping, ca. 1.75 cm across, greenish yellow. Bracts 6-12, oblong-lanceolate, recurved, striped with purple; bracteoles filiform, numerous, much longer than the bracts. Stigma petaloid, 2-fid and inflexed like an umbrella over the style. Fruits ovoid, ca. 3 × 2 cm, 6-ribbed; seeds many, ovoid to ellipsoid, angular.

Flowering & fruiting: August - October

Native range: Tropical Africa, South and Southeast Asia and northern Australia

Distribution: Indo-Malaysia to Australia and Pacific Islands

Occurrence in Maldives: Common in open areas, especially in sandy soil

Uses: The tuber is an important food source. Starch from the tuber is used to stiffen fabrics and the bast fibres of stem are used to make mats. The raw tubers are a good remedy for stomach ailments. Mixed with water and red clay, the plant is eaten for relief from diarrhea and dysentery.



Talipariti tiliaceum (L.) Fryxell



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Synonyms: *Hibiscus hastatus* L. f., *Partium tiliaceum* (L.) A. St. - Hill.

Family: Malvaceae

Local name (Dhivehi): Dhiggaa

English names: Sea hibiscus, Yellow mallow

Description: Trees to 15 m high; bark greyish-brown; young parts softly stellate-tomentose. Leaves simple, alternate, 6-20 × 9-20 cm, broadly orbicular, base cordate or truncate, apex shortly acuminate, coriaceous, densely stellate-tomentose beneath; 7-9 nerves from base, with a linear nectary at the base of main 1-5 nerves beneath; stipules oblong-lanceolate, lateral, enclosing the apical bud; petiole 4-18 cm long. Flowers yellow, axillary, solitary or in terminal racemes; pedicels club-shaped, stout. Calyx campanulate, 5-fid or parted below the middle, lobes lanceolate-acute, densely stellate-pubescent. Petals 5, yellow with or without a red centre changing to pink, softly stellate-tomentose. Anthers reniform. Styles emergent from staminal column. Fruit a capsule, 1.5-2 × 1.5-2 cm, subglobose or slightly obovoid, densely pubescent, mesocarp fibrous, 5-locular; seeds many, reniform, blackish-brown, papillose.

Flowering & fruiting: December - January

Native range: Old World tropics

Distribution: Pantropical

Occurrence in Maldives: A very common tree in natural habitats

Uses: The wood is of moderate quality and used in a variety of applications such as seacraft construction, firewood, wood carvings and furniture. The tough bark can be made into durable rope and used for sealing cracks in boats. The bark and roots are boiled to make a cooling tea to cool fevers. Young leafy shoots are eaten as vegetables. The leaves are considered as a laxative. The fresh bark soaked in water is used to treat dysentery.



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Tamarindus indica L.



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Synonyms: *Tamarindus occidentalis* Gaertn., *Tamarindus officinalis* Hook.

Family: Fabaceae - Caesalpinioideae

Local name (Dhivehi): Helen beli

English names: Tamarind tree, Indian date

Description: Trees, to 25 m high, bark brown to brownish-black, rough with vertical fissures. Leaves paripinnate, alternate; rachis 8-13 cm long; leaflets 20-34, opposite, sessile, base unequal, apex obtuse; lateral nerves 10-15 pairs, looped at the margin. Flowers 1 cm across, yellow with reddish-pink dots, in lax terminal racemes; pedicels upto 5 mm. Calyx tube narrowly turbinate, lined by disc; lobes 4, subequal, oblong, imbricate. Petals 3, outer one, 1 × 0.3 cm, pink dotted, lateral 2, 1-1.5 × 0.7-1 cm, clawed, subequal, oblong-lanceolate, lower pair scaly. Stamens 9, monadelphous, only 3 fertile. Fruit a pod, 10-15 × 1-2 cm, oblong, fruit wall crustaceous, mesocarp pulpy, seeds 3-8 or more, obovoid-ovoid, compressed, brown.

Flowering & fruiting: September – April

Native range: Tropical Africa

Distribution: Widely grown in the tropics

Occurrence in Maldives: In homesteads

Uses: The wood is hard and strong. Fruit pulp is rich in tartaric and citric acids, vitamin C and sugar. The root bark is astringent, constipating, emmenagogue and tonic. The leaves are anodyne, anti-inflammatory, diuretic, febrifuge, aperient and ophthalmic. The fruits are a remedy for bilious vomiting, dipsia, scabies, stomatitis, constipation, haemorrhoids and ophthalmopathy.



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Tecoma stans (L.) Juss. ex Kunth



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Synonyms: *Stenolobium stans* (L.) Seem., *Bignonia stans* L.

Family: Bignoniaceae

Local name (Dhivehi): Bokarumaa

English names: Yellow bells, Trumpet-flower, Yellow elder

Description: Large shrubs to small trees. Leaves opposite, pinnate, with 3-7 leaflets; leaflets elliptic to elliptic-ovate. Flowers in short terminal panicles, bright yellow, fragrant. Calyx tubular-campanulate, ca. 4.5 mm long; lobes triangular, acuminate, ciliate. Corolla tube 32-33 mm long, abruptly contracted at the base, sparse pubescent within and glandulose towards the base; lobes subequal. Stamens included; filaments of longer stamens ca. 20 mm long;

staminodes filiform, 5-6 mm long. Disc shallow cupular, 5-lobed, fleshy. Ovary ca. 3.5 mm long; style 18-20 mm long; stigma 2-lobed, lobes oval to ovoid, ca. 1.5 mm long. Capsule 12-16 × 0.7-0.8 cm; seeds orbicular-compressed, 5 × 6-6.5 mm, wing 12-18 mm broad.

Flowering & fruiting: December- April

Native range: America and parts of the Caribbean

Distribution: Widespread as a garden plant

Occurrence in Maldives: Cultivated in homesteads and as an avenue plant

Uses: An ornamental plant. Leaf infusion is taken orally for diabetes and stomach pains. A decoction of leaf and root acts as a diuretic.

Tectona grandis L. f.



Synonyms: *Tectona theca* Lour., *Theka grandis* (L.f.) Lam.

Family: Verbenaceae

Local name (Dhivehi): Haivakaru

English names: Teak, Indian-oak

Description: Deciduous trees, to 30 m high, bark yellowish-brown, branchlets 4-angled. Leaves simple, opposite, 25-60 × 15-30 cm, ovate, obovate, base attenuate, apex acute or obtuse, pubescent below with minute red glands; lateral nerves 8-10 pairs; petiole 10-50 mm long. Flowers bisexual, white, 7 mm across, in terminal cymose panicles. Calyx 5 mm long, campanulate, lobes 5-6, subequal. Corolla 6 mm long, lobes 5-6, oblong, spreading. Stamens 5-6, equal, inserted at the throat. Fruit a drupe, 1.5-2 cm across, globose, brown, densely floccose hairy, covered by the inflated calyx, epicarp spongy, endocarp stony; seeds 1-4, oblong.

Flowering & fruiting: May - January

Native range: South and Southeast Asia

Distribution: Widely planted in the tropics for its highly valued timber

Occurrence in Maldives: Planted in some of the islands

Uses: One of the most durable and versatile timber for building construction, furniture, handicrafts etc. The oil obtained from seeds, flowers and wood stimulates the growth of hair and is useful in the treatment of eczema and ringworm. The wood oil is also anti-rheumatic and often used to treat sprains.



Terminalia catappa L.



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Synonyms: *Myrobalanus catappa* (L.) Kuntze, *Terminalia badamia* DC.

Family: Combretaceae

Local names (Dhivehi): Gobu gas, Midhili gas, Madhu gas

English names: Indian almond tree, Java almond, Pacific almond, Singapore almond

Description: Trees, to 25 m high, often buttressed; bark brownish to grey; branches horizontal and whorled in young trees. Leaves simple, alternate, densely clustered at the tip of branchlets, 13-35×6-20 cm, obovate, orbicular-obovate, base acute or attenuate, apex round or obtuse; lateral nerves 6-13 pairs; 2 glands prominent on either side at the base of the midrib beneath; petiole 8-15 mm long. Flowers polygamous, 4 mm across, sessile, white or yellowish-green, in axillary simple, pubescent racemes, 8-20 cm long. Calyx tube 3-5 × 1-1.3 mm, pubescent, expanded portion cupular; lobes 5. Petals 0. Stamens 10; filaments 3-4 mm long. Fruits a drupe, 3-7 × 2.5-4.5 cm, broadly ellipsoid to ovoid, brown or reddish-brown, glabrous, glossy.

Flowering & fruiting: March - January

Native range: Tropical Asia and the Pacific

Distribution: Widely planted throughout the tropics

Occurrence in Maldives: Planted in homesteads and also naturalised

Uses: The wood is soft. The kernel of the fruit is edible and has aphrodisiac activity. The leaves, bark and fruits are used to treat dysentery, coughs, asthma, leprosy and headache. Leaves are effective against intestinal parasites and also used to treat eye problems, rheumatism and wounds. Juice of the leaves and bark are useful in scabies, skin diseases, leprosy, throat and mouth problems and diarrhea.



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Terminalia arjuna (Roxb. ex DC.) Wight & Arn.



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Synonym: *Pentaptera arjuna* Roxb. ex DC.

Family: Combretaceae

Local name (Dhivehi): Arolhi gas

English names: Indian-laurel, White murdah

Description: Evergreen trees, to 30 m tall, bole often buttressed; bark pinkish-grey, smooth, flaking off in thin layers; exudation red, gummy; branchlets drooping. Leaves simple, opposite to alternate; 7.5-16×3.7-8.5 cm, oblong, elliptic, oblong-ovate or oblong-obovate, base round, obtuse or cordate, apex obtuse or rounded, margin crenulate or entire, 2 glands at the base on the lowerside; lateral nerves 10-17 pairs, prominent; petiole 5-15 mm long. Flowers dull yellow, 2-3 mm across, in short axillary spikes. Calyx tube 0.5-2×1-1.5 mm, constricted above the ovary; lobes 5, cream; disc 5-lobed, pilose. Petals 0. Stamens 10, in 2 rows. Ovary ovoid, 1.5 mm, inferior; ovules 2 or 3, pendulous. Fruit a drupe, 6 × 3 cm, oblong, 5-7 winged; wings equal, lines on the wings oblique and curving upwards, apex notched; seed one.

Flowering & fruiting: November- June

Native range: South Asia

Distribution: South Asia

Occurrence in Maldives: Planted as an avenue tree in some islands

Uses: In traditional medicine, the bark is used to treat fractures, ulcers, urethrorrhea, leucorrhea, diabetes, anaemia, cardiopathy, hyperhidrosis, fatigue, asthma, bronchitis, otalgia, dysentery, cirrhosis of the liver and hypertension.



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Thespesia populnea (L.) Sol. ex Correa



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Synonyms: *Hibiscus litoreus* J.Presl, *Hibiscus populneus* L.

Family: Malvaceae

Local name (Dhivehi): Hirundhu

English names: Indian tulip tree, Portia tree, Seaside mahoe

Description: Trees, to 15 m high. Leaves simple, alternate, 5-12.7 × 5.5-15 cm, orbicular or ovate, base cordate or truncate, apex acute or acuminate, margin entire or dentate, with peltate scales above, glabrescent or stellate-tomentose beneath; 5-7 nerved from the base, palmate; petiole 5-10 cm, swollen tipped. Flowers bisexual, solitary or in cymes, axillary or terminal; pedicels 20-50 mm long, jointed near the base. Calyx cupular, minutely 5 toothed or 5-parted, accrescent and flattened in fruit. Corolla light yellow with dark purple centre, fading to purplish-pink, petals 5, 5-7.5 × 4-6 cm, obliquely obovate, narrowed and fleshy at base. Staminal tube 15-25 mm long, 5-toothed at apex. Fruit a capsule, globose, indehiscent; seeds many, ovoid, pubescent.

Flowering & fruiting: March – June

Native range: Possibly Asia and the Pacific

Islands

Distribution: Pantropical

Occurrence in Maldives: A common tree in natural habitats

Uses: The timber is hard, termite-resistant, has an attractive grain and dark-red colour. The tough fibrous bark is made into rope. A yellow dye is obtained from the flower and fruit, and a red one from the bark and heartwood. Tannin, oil and gums are also extracted from the plant. The bark is used to treat skin diseases, dysentery and haemorrhoids. Leaves are applied to the inflamed and swollen joints. The young fruit secretes a yellow sticky sap which is used to treat ringworm and other skin diseases



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Thunbergia grandiflora (Roxb. ex Rottl.) Roxb.



Synonym: *Flemingia grandiflora* Roxb. ex Rottl.

Family: Acanthaceae

Local name (Dhivehi): Kulhandhilimaa

English names: Blue trumpet vine, Blue sky vine, Scrambling sky flower

Description: Climbing shrubs. Leaves opposite, to 10×7 cm, ovate, cordate, hastate or sagitate, apex acuminate, margin distantly dentate, glabrous or slightly puberulous; petiole to 2.2 cm. Flowers large, in axillary racemes; bracts spathaceous, tomentose; bracteoles falcate. Calyx to 2 mm long. Corolla blue or white, tube widened, lobes subequal, spreading, 3.5 cm across. Stamens 4, attached at the throat of the tube; anthers oblong. Capsules globose, beaked; seeds 4, globose, retinacula absent.

Flowering & fruiting: February - July

Native range: Indian sub-continent, southern China and Myanmar

Distribution: South Asia, tropical Australia, tropical America and some Oceanic islands

Occurrence in Maldives: Grown as an ornamental plant in home gardens

Uses: In traditional medicine the plant is used as a remedy for rheumatic arthralgia, algomenorrhea and swelling pains caused by falls and fractures. The leaves are used to treat stone in urinary bladder and elephantiasis. The plant is also used as green manure.

Threat & damage: An invasive plant which can smother, outcompete and affect germination and establishment of native plant species.



Tithonia diversifolia (Hemsl.) A. Gray



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to acuminate, crenulate, base decurrent, tomentose below. Heads 8-12 cm across, solitary, axillary, on long hollow peduncle; bracts 4-seriate, outer smaller, obtuse, puberulus; inner 10-14 mm long, oblong, obtuse. Flowers 2-types; outer female, ligulate; limb 3-5 × 1.5 cm, oblong, entire or 2-toothed, yellow. Inner flowers tubular, bisexual; corolla 8-10 mm long, 5-lobed, yellow; anthers erect, base obtuse, black. Achenes 6 mm long, dark brown, hairy; pappus of two bristles.

Flowering & fruiting: September- May

Native range: Mexico, Central America and Cuba

Distribution: America, Tropical Africa, Asia and the Pacific Islands

Occurrence in Maldives: Planted in home gardens

Uses: As an ornamental plant and as a fodder. Traditionally, the plant is used for the treatment of bone fractures, bruises and sprains. An infusion of leaves is a remedy for constipation, stomach pains, sore throats and as antidiarrheal, antimicrobial and antispasmodic.



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Synonyms: *Helianthus quinquelobus* Sessé & Moc., *Mirasolia diversifolia* Hemsl.

Family: Asteraceae/Compositae

Local name (Dhivehi): Bodu mirihi

English names: Mexican sunflower, Tree marigold

Description: Shrubs. Leaves alternate, 10-25 cm long, 3-5 lobed; lobes acute

Tournefortia argentea L. f.



Synonyms: *Messerschmidia argentea* (L. f.) I.M. Johnst., *Tournefortia arborea* Blanco

Family: Boraginaceae

Local name (Dhivehi): Boshi

English name: Tree heliotrope

Description: Shrubs to small trees, bark greyish. Leaves 15×5 cm, ovate or ovate lanceolate, apex acute, base cuneate; petiole to 2 cm, densely silky pubescent. Peduncles terminal, or from an upper axil, 2-12 cm; cymes often forming a panicle 15 cm dia; flowers sessile, white. Sepals 1-3 mm long, ovate, densely woolly, ultimately glabrescent. Corolla-tube as long as the sepals; lobes 2 mm, ovate, crenulate. Stigma subsessile, obscurely 2-lobed. Drupes 6-7 mm diam, subglobose.

Flowering & fruiting: July – February

Native range: Indo-Pacific region

Distribution: In the tropics.

Occurrence in Maldives: A common tree associate in natural habitats

Uses: The wood is used to make specific canoe parts, goggles, carved masks and as firewood. The plant is known to be effective in treating poisoning through sea animals, wounds, stomach aches and liver and blood problems. Young shoots are a remedy for filariasis.



Tradescantia spathacea Sw.



Synonyms: *Rhoeo spathacea* (Sw.) Stearn, *Tradescantia discolor* L'Hér.

Family: Commelinaceae

Local name (Dhivehi): Raiykandholhu

English names: Boat lily, Oyster plant, Moses-in-the-boat

Description: Perennial herbs with short, stout stem nearly hidden by overlapping leaf bases which forms clumps by offshoots from fleshy rootstock. Leaves spreading, erect, closely overlapping in spiral pattern. Blades broadly linear, sharp-tipped, waxy, stiff, fleshy, 15-30×2.5-8 cm; upper surfaces dark green or green with pale yellow stripes; lower surfaces usually purple. Flowers small, white, clustered within a folded bract, 3-4 cm long, short stalked from leaf axils. Petals 3; stamens 6 with hairy stalks. Fruit a 2-seeded capsule,

in clusters within the bract.

Flowering & fruiting: September – April

Native range: Mexico, Central America and the Caribbean

Distribution: Widely introduced as a garden plant

Occurrence in Maldives: Grown as ornamental plant in gardens

Uses: The decoction of the flowers and leaves is recommended for colds, whooping cough, nasal bleeding, bacillary dysentery and blood in the stools.

Threat & damage: It grows as a dense cover preventing germination of seeds of native plants. The plant can cause stinging, itching and rashes in humans if its surface or the astringent juice is contacted.

Trichosanthes anguina L.



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Synonym: *Cucumis anguina* L.

Family: Cucurbitaceae

Local name (Dhivehi): Chichanda

English name: Snake gourd

Description: Annuals; stems slender, puberulous. Leaves alternate, 10-15×12-18 cm, orbicular-reniform, distantly denticulate, deeply 5-lobed, lobes pubescent on both surfaces; petiole 12-15 cm long, villous. Tendrils 2-3 fid. Plants monoecious. Male flowers: peduncles 10-25 cm long, robust, 8-15 flowered; pedicels 0.5-2.0 cm long; calyx-tube 2.5-3.0 cm long, subcylindric, teeth ca. 2 mm long, reflexed. Petals white, ca. 8-9×3 mm, oblong, 3-nerved. Staminal filaments slender, ca. 2 mm long; pistillode 15-17 mm long. Female flowers: peduncles 0.5-5.0 cm long, flowers solitary; ovary narrowly fusiform. Fruits up to 1.5 m, often twisted, surface smooth, often 7-8 white stripes along the length; seeds ca. 14-17×7-9 mm and ca. 3-5 mm thick, oblong, finely rugulose, undulate, apex round or obscurely

truncate, base attenuate.

Flowering & fruiting: August - April

Native range: Tropical Asia and Africa

Distribution: Widely cultivated in the tropics

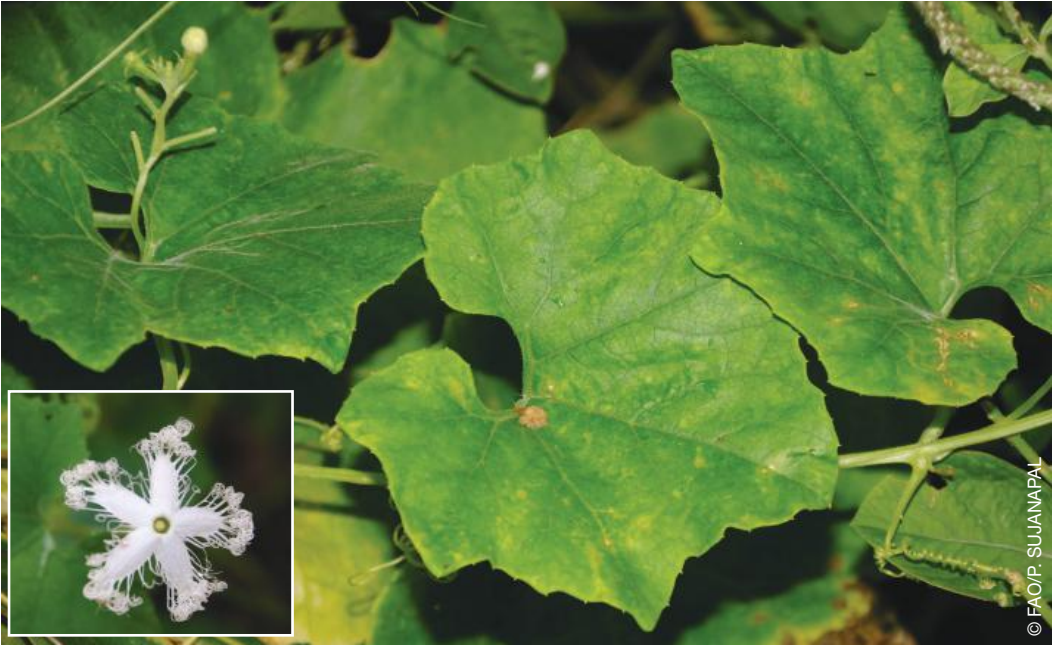
Occurrence in Maldives: Cultivated in farming areas

Uses: Fruit is an excellent vegetable. The roots and seeds are useful in syphilis and verminosis. A decoction of stem and leaves are given for bilious disorders and stomachic.



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Trichosanthes cucumerina L.



Synonyms: *Trichosanthes ambrozii* Domin, *Trichosanthes colubrina* J. Jacq.

Family: Cucurbitaceae

Local name (Dhivehi): Jangali chichanda

English names: Wild snake gourd, Malabar patola

Description: Slender vines, stem hairy. Leaves 8-11×8-10 cm, palmately 3-5-lobed, broadly ovate or sub-orbicular, base truncate-cordate, margin distantly denticulate, apex acute, lower surface glandular-pubescent, chartaceous; petiole to 3.2 cm. Male flowers in axillary racemes, ebracteate; pedicel to 2 cm long. Calyx-tube turbinate. Petals oblong-lanceolate, long-fimbriate, white; stamens 3. Female flowers solitary; ovary ribbed, pubescent. Fruits ovoid-fusiform, to 10 cm, beaked, white-striped when young, yellow when ripe.

Flowering & fruiting: October - April

Native range: Southeast Asia, Australia and Western Pacific Islands

Distribution: Tropical Asia, East Africa and Australia

Occurrence in Maldives: Occasional along the border areas of forests

Uses: The fruit is an excellent vegetable. The roots and seeds are useful in syphilis and verminosis. A decoction of the stem and leaves are given for bilious disorders and stomachic.



Tridax procumbens (L.) L.



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Synonym: *Balbisia elongata* Willd.

Family: Asteraceae/Compositae

Local name (Dhivehi): Maavina

English names: Coat-button, Mexican daisy

Description: Procumbent herbs. Leaves simple, opposite, 3-6 × 1.5-3 cm, ovate, apex acute, serrate, bulbous-based, hairy; petiole 5-10 mm long. Heads 1.3 × 1.5 cm, solitary, on long peduncles; bracts in 3-series, lanceolate, hairy. Outer row of flowers ligulate, female, limb 3 × 2 mm, 3-toothed, white; inner flowers bisexual, tubular; corolla 6 mm long, 5-lobed at apex, yellow. Achenes 2 mm long, obovoid, densely hairy; pappus many, setaceous.

Flowering & fruiting: Throughout the year

Native range: Tropical America

Distribution: Widespread in the tropics and subtropics

Occurrence in Maldives: Common in open areas

Uses: The plant is hepato-protective, anti-inflammatory, wound healing, anti-diabetic, hypotensive and anti-coagulant. The leaf juice possesses antiseptic, insecticidal and parasitocidal properties. It is also used as a biocarbon absorbent for removal of excess flouride.



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Triphasia trifolia (Burm.f.) P. Wilson



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Synonym: *Limonia trifolia* Burm. f.

Family: Rutaceae

Local name (Dhivehi): Kudhilunboa

English names: Lime berry, Myrtle lime

Description: Shrub to small trees, twigs terete, bearing paired spines in the axils of leaves. Leaves 3-foliolate, terminal leaflet ovate, base cuneate, apex emarginate, 2-4 × 1.5-2 cm; lateral leaflets much smaller, 1-2-2 × 0.8-1.2 cm; petiolules 1.5-2 cm; petioles 3-5 mm. Flowers singly or 2 or 3 in the axils of the leaves; peduncles short; flower buds cylindrical, 10-12 × 3-4 mm. Flowers 3-merous. Sepals small, 1.5-2 mm long, 3-lobed, green, persistent. Petals white, 10-13 × 3.6-4.5 mm. Staminal filaments slender. Disk annular or short-cylindric. Fruit ovoid or subglobose, sometimes apiculate, 1.2-1.5 cm long, dull reddish-orange or crimson when ripe; rind with many small oil glands; seeds 1-3, immersed in mucilaginous pulp.

Flowering & fruiting: Throughout the year

Native range: Southeast Asia, Malaysia and Christmas Islands

Distribution: In the tropics and subtropics

Occurrence in Maldives: Common in natural habitat as an under shrub.

Uses: As an ornamental and hedge plant. Fruits edible, used either raw or cooked. Fruits can also be pickled or made into jams. The leaves are known to be anti-fungal and antibacterial and used to treat colic, diarrhea and skin diseases.

Threat & damage: An invasive plant which can grow in open and shaded areas forming impenetrable spiny thickets. Spread of the weed is through seeds which are mainly dispersed by birds. The plant can smother and outcompete native plants for light and water.



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Turnera ulmifolia L.



Synonym: *Turnera alba* Liebm.

Family: Turneraceae

Local names (Dhivehi): Bakarinukaa, Reendhoomaa

English names: Sundrops, Yellow alder, Yellow buttercup

Description: Erect subshrubs; branchlets glandular-pubescent. Leaves 4-12 × 1.5-3.2 cm, lanceolate, base cuneate, decurrent with 2 glands, margins irregularly crenate-serrate, apex acute to acuminate, hairy on both sides; petiole 1-2.5 cm long. Flowers 3.5-4 cm across, axillary, solitary, homostylous; pedicel adnate to the petiole in the lower part, free above; bracteoles lanceolate, serrate, with 2 large marginal glands. Calyx densely appressed, pubescent; tube 1-1.3 cm long, funnel-shaped; lobes 7-10 mm long, lanceolate. Petals yellow, ca. 2 cm long, obovate, apex truncate. Ovary ovoid, pubescent, 1-celled; ovules many per cell; styles 3. Capsule 6-8 mm long, ovoid,

hairy, 3-valved. Seeds many, elliptic, brown with white aril.

Flowering & fruiting: May – December

Native range: South-Eastern USA, Southern Mexico, Central America and the Caribbean

Distribution: Australia, Africa, Southeast Asia and the Oceania

Occurrence in Maldives: Common in open areas

Uses: An ornamental plant. It is used to treat rheumatism.



Vitex negundo L.



Synonym: *Vitex spicata* Lour.

Family: Verbenaceae

Local name (Dhivehi): Dhunnika

English names: Chaste tree, Five-leaved chaste tree, Negundo

Description: Shrubs or small trees; purple pubescent all over, aromatic. Leaves 3-5-foliolate; leaflets 6-13 × 2-5 cm, narrowly oblong or elliptic to lanceolate, base acute, apex acuminate. Panicles terminal, 10-25 cm long. Calyx 5-toothed, obconic, ca. 3 mm long, teeth triangular. Corolla greenish white, deep purple to violet, ca. 7 mm across, hypocrateriform; tube 3-5 mm long, puberulent without, upper lip 2-lobed, lower 3-lobed with the middle lobe larger, obovate, undulate-margined, other lobes shorter, subequal, obtuse. Stamens 4, filaments purple. Ovary ca. 1 mm long;

style purple; stigma 2-fid. Drupe 3-5 mm across, globose, purple or black.

Flowering & fruiting: February - July

Native range: Tropical East and South Africa and Asia

Distribution: Cultivated throughout the tropics

Occurrence in Maldives: In homesteads

Uses: The leaves yield an essential oil which possesses insecticidal properties and is laid over stored grain to keep insects away. They are antimicrobial and are smoked for relief of headache and catarrh. A decoction of the leaf is used in smoke baths for the treatment of febrile, catarrhal and rheumatic problems. The roots are used to treat dysentery. The flowers are astringent and fruits are considered vermifuge.

Wollastonia biflora (L.) DC.



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Synonyms: *Wedelia biflora* (L.) DC., *Verbesina biflora* L.

Family: Asteraceae / Compositae

Local name (Dhivehi): Merihi

English name: Beach sunflower

Description: Scandent shrubs; stem ribbed, sparsely hairy. Leaves opposite, 5-10 × 2.5-7 cm, ovate-acuminate, cuneate at base, margin distantly serrate, rough with appressed hairs on both sides, 3-nerved from base; petiole to 1-2 cm long. Heads 1-2 cm across, 1-3 together, heterogamous, rayed; peduncle unequal, to 5 cm long, hairy. Involucre campanulate; bracts 2-3 seriate, outer ovate-lanceolate or oblong-lanceolate. Ray florets ligulate, 2-3 toothed, yellow; outer series of flowers female; inner bisexual. Achene 3-4 angled, narrowed towards base, truncate at apex, slightly tubercled; pappus absent.

Flowering & fruiting: Throughout the year

Native range: Indo-Pacific region

Distribution: Paleotropics

Occurrence in Maldives: Forms dense thickets in open coastal vegetation

Uses: Pounded leaves are used as a poultice on cuts, ulcers, sores and varicose veins. Decoction of the roots is used in stomach ache.

Threat & damage: The plant is an aggressive invader in Maldives threatening the native flora, especially the coastal vegetation. Spread of the plant is mainly through vegetative means and it is difficult to manage its spread once established.

Management: Hand pulling of saplings would be helpful but will have to be repeated at periodic intervals until regeneration from the soil seed bank is exhausted. Planting fast growing native species in the weed removed areas will also arrest regeneration. For larger shrubs, herbicidal application using the cut-stump method will be useful.

Ximenia americana L.



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Synonyms: *Heymassoli spinosa* Aubl., *Ximenia aculeata* Crantz

Family: Olacaceae

Local names (Dhivehi): En boo, Umbuvah

English names: Sea lemon, Tallow wood, Yellow plum

Description: Shrubs or small trees; branchlets usually spiny. Leaves simple, alternate, crowded, 3-5 × 2-3 cm, ovate, elliptic, or obovate, more or less leathery, base obtuse, apex obtuse, apiculate, mucronulate, or sometimes emarginate; secondary veins 3-5 on each side of the midvein; petiole 3-5 mm. Cymes or racemes 1.5-2.5 cm, 3-6-flowered. Pedicel 2-3 mm. Calyx cupular, ca. 1 mm. Petals 4 or 5, white or greenish, oblong, 5-7 mm. Stamens 8 or 10. Ovary ovoid-conical. Drupe lemon-yellow or orange-red, globose to ovoid, 2-3 cm in diam.

Flowering & fruiting: January – June

Native range: Australia and Asia

Distribution: Pantropical

Occurrence in Maldives: Occasional in forest areas

Uses: The fruits are edible, eaten raw or cooked and used for making juice, jelly and wine. The leaves and twigs are used to treat fever, colds, as a laxative and an eye lotion. They are also a remedy for headaches, angina, and are a poison antidote. The roots are used to treat skin problems, headaches, venereal disease and sleeping sickness.



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Xylocarpus rumphii (Kostel.) Mabb.



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Synonyms: *Aglaiia zollingeri* C.DC., *Carapa rumphii* Kostel.

Family: Meliaceae

Local name (Dhivehi): Marugas

English name: Cedar mangrove

Description: Medium-sized evergreen trees, bark greyish, fissured, branchlets sparsely lepidote. Leaves alternate, paripinnate, to 9 cm long; leaflets 2 or 3 pairs, to 6×3.5 cm, opposite, obovate, cuneate at base, obtuse at apex, coriaceous; petiole to 6 cm long. Inflorescence paniculate, to 10 cm long; flowers ca. 1 cm across, white to light pink. Petals oblong. Staminal tube to 4 mm long, glabrous. Fruit to 6 cm across, globose; seeds arranged radially from remains of axis outwards, convex on back, pink.

Flowering & fruiting: February - December

Native range: Paleotropics

Distribution: Paleotropics

Occurrence in Maldives: Rare. Occurs in a few northern islands along the mangrove habitats

Uses: The wood is hard and durable. The bark is used for tanning and for dyeing cloth. The seeds are used to treat stomach ache.



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Ziziphus mauritiana Lam.



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Synonyms: *Rhamnus jujuba* L., *Zizyphus sativa* Gaertn.

Family: Rhamnaceae

Local names (Dhivehi): Kunnaaru, Kashi kunnaaru

English names: Jujube tree, Indian jujube, Indian cherry

Description: Small trees; bark dark grey with deep vertical cracks; branchlets, petiole and underside of leaves white buff, tomentose. Leaves simple, alternate, distichous, 1.5-4×1.5-3 cm, ovate, elliptic-ovate, elliptic-orbicular or suborbicular, base oblique, subcordate or round, apex round and retuse, margin glandular-denticulate or serrate, 3-ribbed from base; lateral nerves 2-3 pairs; stipular spines solitary or in pairs,

straight or one of them recurved; petiole 4-8 mm. Flowers 5 mm across, greenish-yellow, in 15-20 flowered dense cymose axillary fascicles; peduncle much reduced. Calyx tube 0.5 mm, woolly outside; lobes 5, triangular, prominently keeled on inner face. Petals 5, cucullate. Stamens 5, enclosed within the petals. Fruit a drupe 1×0.5 cm, oblong-globose, yellow or orange when ripe; 1-2-celled; seeds 1 or 2, compressed.

Flowering & fruiting: February – April

Native range: South Asia and East Africa

Distribution: Paleotropics

Occurrence in Maldives: A common tree in natural habitats as well as homesteads

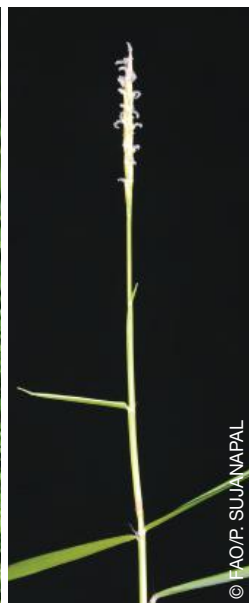
Uses: The fruits are edible and rich in Vitamin C. They are eaten raw or pickled or used in beverages. The timber is hard, strong, fine-grained, fine-textured, durable, most often used in house construction and to make boat ribs and agricultural implements. The fruits are applied to cuts and ulcers to help healing.

Threat & damage: The dense growth of the plant and its efficiency in outcompeting native plants adversely affect the biodiversity and functioning of ecosystems.



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Zoysia matrella (L.) Merr.



Synonyms: *Agrostis matrella* L., *Matrella juncea* Pers.

Family: Poaceae / Gramineae

Local name (Dhivehi): Ban Hui

English names: Mascarene grass, Manila grass

Description: Annual herbs; culms erect, to 10 cm long, to 0.5 mm wide. Leaf-sheaths 0.5-1 cm; ligule membranous, fimbriate, 0.5 mm; blades linear, 1-2.5 cm, rigid, convolute, base pilose. Raceme spiciform, solitary, to 2.5 cm. Spikelets ovoid, 2.5-3 mm, spiral, laterally compressed, 1-flowered, articulate on stout pedicel, appressed to rachis; glume 1, coriaceous; lower glume 0; upper glume ovate-lanceolate, indurated, obscurely 3-nerved, somewhat apiculate; lemma lanceolate, hyaline; palea narrow. Anthers 3. Caryopsis oblong-ovoid, to 1.5 mm, free within lemma and glume.

Flowering & fruiting: March – September

Native range: Asia-Pacific

Distribution: Indo-Malaysia, Australia and Mauritius

Occurrence in Maldives: Occasional in open areas

Uses: An ornamental grass. Also grown as a forage on sandy soils and coastal areas where other grasses are not adapted. It is a good sand-binder and several cultivars have been used for setting up lawns or turf on golf courses.



Glossary of botanical terms

- Acuminate - sharp-pointed, tapering gradually or abruptly with the sides of the apex somewhat concave
- Acute - ending in a sharp point
- Alternate - with one leaf at a node
- Apiculate - ending in a short, sharp but not ridged point
- Aril - an accessory appendage of the seed from the hilum and often covering the seed
- Aristate - terminated by a slender often bristle like appendage, usually the continuation of the mid-vein
- Attenuate - a gradual tapering, as the base or apex of the leaf blade
- Auriculate - having round or ear like lobes
- Berry - a pulpy fruit with immersed seeds
- Bifarious - in two opposite, vertical rows
- Bipinnate - doubly pinnate
- Capsule - a dry dehiscent, syncarpous longitudinally splitting fruit
- Catkin - a pendulous inflorescence of sessile unisexual flowers on an elongate axis
- Caudate - with a slender tail-like appendage
- Cauliflorous - with flowers or inflorescence arising on the trunk or older branches
- Chartaceous - a papery texture
- Circinate - coiled
- Cocci - separating segments of a lobed fruit
- Compound - a leaf of two or more apparent blades
- Connate - united to one another
- Cordate - heart shaped; of the leaf base when deeply notched
- Coriaceous - of leathery texture
- Corymbs - an inflorescence with flowers arranged in a flat topped or slightly domed fashion
- Cuneate - wedge-shaped
- Cuneiform - wedge shaped, widest at or near the apex and tapering to a narrow base
- Cuspidate - gradually tapering to a rigid point
- Cyme - an inflorescence in which the lateral branches dominate the main axis in growth
- Decurrent - prolonged downwards from base
- Deltoid - triangular in outline
- Dentate - with sharp rather coarse teeth that point outwards from the mid-vein
- Denticulate - minutely dentate
- Dichasial - a cymose inflorescence with two lateral axes
- Didymous - slightly two lobed
- Digitate - having the leaflets in the form of a spread hand

- Dioecious - unisexual with male and female flowers on separate plants
- Drupe - an indehiscent fruit with a stony endocarp
- Echinate - with sharp bristles, prickles or spines
- Elliptic - oval in outline with narrowed rounded ends
- Emarginate - deeply notched
- Estipulate - without stipules
- Falcate - sickle-shaped
- Fig - the fruit-syconium-of a banyan tree
- Follicle - a mono carpellary fruit dehiscing along the ventral suture
- Glabrate - essentially glabrous, but found
- Glabrous - devoid of hairs
- Glaucous - with a bluish grey tinge
- Hastate - with a pair of basal lobed flaring outward
- Head - a composite inflorescence on a very condensed, flat or globose axis
- Hirsute - bearing long hairs
- Hispid - thickly covered with long, stiff, bristly hairs
- Imbricate - with the leaves overlapping, shingle like
- Intercostae - interconnections between the primary lateral nerves of a leaf
- Nerve intramarginal - a nerve running parallel to or near the edge of a leaf blade
- Intrapetiolar - of stipules situated in the petiolar axis
- Involucre - the whorl of bracts subtending a flower cluster
- Laciniate - irregularly cut into narrow segments
- Lanceolate - tapering at both ends and broader near the base
- Lateral nerves - the primary nerves arising from the midrib of a leaf blade
- Leaflets - a leaf of two or more apparent blade(s) and each apparent blade is a leaflet
- Lenticel - lenticular corky spots on the bark
- Lepidote - scurfy with minute scales
- Monoecious - bisexual plants with unisexual flowers
- Mucronate - abruptly tipped with a shoot projection of the mid-vein, accompanied or not by a small amount of leaf tissue
- Mucronulate - with a short sharp abrupt spur
- Nut - a hard indehiscent, 1-seeded fruit
- Obcordate - with the apex two-lobed, inversely shaped
- Oblanceolate - lanceolate with the broader end towards the tip
- Oblique - with the lowermost sides markedly unequal
- Oblong - longer than broad, with sides more or less parallel for most of their length
- Obovate - egg-shaped-broader towards the tip
- Obovoid - inversely egg-shaped

- Obtuse - blunt or rounded
- Odd-pinnate - imparipinnate
- Opposite - with two leaves at a node, one on the opposite side of the twig from the other
- Orbicular - more or less circular
- Ovate - egg-shaped
- Palmate - with segments diverging like the fingers of palm
- Panicle - a much branched inflorescence
- Paripinnate - pinnately compound with an odd terminal leaflet
- Peltate - stalk when attached to the lower surface and not to the margin, as in some leaves and hairs, scales, etc.
- Perianth - the sterile envelopes (whorls) of a flower
- Pericarp - fruit-wall
- Petiole - stalk of a leaf
- Petiolule - stalk of a leaflet
- Pilose - with long soft simple hairs
- Pinnate - a compound leaf with leaflets arranged on either side of the leaf axis
- Pinnatifid - with the margin pinnately cleft or parted
- Pod - a dry dehiscent fruit characteristic of the legumes
- Polygamous - with unisexual and bisexual flowers on the same or different plants of the same species
- Prickly - covered with prickles, spinelike excrescences of bark
- Puberulous - with short soft hairs
- Pubescent - with soft straight hairs
- Pulvinate - of petioles or rachis thickened at the base
- Punctate - dotted with small glands
- Pustular - with small blister-like crests
- Pyrene - one seeded segment of a drupe
- Pyriform - pear shaped
- Raceme - a continuously growing inflorescence with stalked flowers
- Rachis - the axis of a compound leaf
- Receptacle - an invaginated, cup-like structure bearing many other organs
- Reniform - kidney shaped
- Retuse - with a rounded apex very slightly notched at the terminus of the mid-vein
- Revolute - rolled back from the margins
- Rhomboid - rhombus-like
- Ribbed - with longitudinal nerves
- Rugose - with the reticulation more deeply grooved over the network of veinlets
- Sagittate - with a pair of basal lobes (or ears) turned downwards and inwards, their apices acute or obtuse, arrow shaped

- Scabrous - rough to touch, owing to the scattered stiff hairs or tubercles
- Scalariform - of intercostae when arranged like the cross bars of a ladder
- Scarious - thin, dry, stiff, transparent
- Serrate - of margin toothed like a saw with teeth directed forward
- Serrulate - minutely serrate
- Sessile - without a stalk
- Simply pinnate - compound leaves with one degree of pinnation
- Sinuate - of wavy margins
- Spathulate - similar to oblanceolate but tapering to a very narrow base and the apex usually obtuse
- Spike - an inflorescence with sessile flowers on long axis
- Spiny - bearing one or more modified stems, leaves or stipules reduced to spines
- Stellate - star shaped
- Stipulate - with stipules (paired scales, spines or blade like structures at the base of a petiole)
- Stipule - petiolar, often flat appendage
- Strigose - with straight, stiff, short hairs, mostly appressed or weakly ascending, bristle like
- Subopposite - of the leaves when neither strictly opposite nor strictly alternate
- Subulate - awl shaped, as a juvenile leaf of Juniper, tapering from base to apex and usually sharp pointed
- Succulent - with soft, juicy cellular tissue
- Terete - cylindrical, circular in cross section
- Testa - the outermost coat of a seed
- Tomentose - densely covered with soft, tangled hairs
- Trifoliolate - with three leaflets
- Trigonous - three angled
- Triquetrous - three angled and three faced
- Truncate - ending abruptly as though cut off
- Turbinate - top shaped
- Umbel - an inflorescence in which the pedicels of the flowers radiate from a common point
- Umbellule - a second order umbel in a compound umbel
- Urceolate - urn shaped, tubular and contracted at or below the mouth
- Verrucose - warty
- Verticillate - whorled
- Villous - covered with long, soft, weak hairs
- Viscid - covered with a sticky exudate
- Whorled - three or more leaves or flowers at a node arranged in a ring around an axis
- Woolly - covered with dense, long, soft, entangled, curled hairs

Selected references

- Arthur Whistler W. 2009. *Plants of the Canoe People: An Ethnobotanical Voyage Through Polynesia*. National Tropical Botanical Garden. USA
- Basu BD. 1975. *Indian Medicinal Plants*. Vols. 1-4, Bishen Singh Mahendrapal Singh. Dehra Dun.
- Burkill HM. 2010. *The Useful Plants of West Tropical Africa*, Vol. 1-6 (rev. ed.). Royal Botanic Gardens. Kew.
- Burkill IH, William B, Frederick WF, Scriveno JB and James GW. 1935. *A Dictionary of the Economic Products of the Malay Peninsula*. Crown agents. London.
- CAB International. 2010. *Invasive Species Compendium*. Published on the Internet; <http://www.cabi.org/isc/>
- CSIR. 1948–1976. *The Wealth of India*. 11 vols. Council of Scientific and Industrial Research. New Delhi.
- CIF. 2004. Conservation International Foundation. <http://www.conservation.org>
- De Fonseka RN and Balasubramaniam, S. 1984. *An Illustrated Account of Some Maldivian Plants*. Ministry of Education, Male. Maldives
- Dixit RD and Vohra JN. 1984. *A Dictionary of the Pteridophytes of India*. Botanical Survey of India. Calcutta.
- Duke JA and Wain KK. 1981. *Medicinal Plants of the World*. Longman. UK.
- Fosberg FR. 1957. The Maldives Islands, Indian Ocean. *Atoll Research Bulletin* 58: 1-37
- Gamble JS and Fischer CEC. 1915-1936. *The Flora of the Presidency of Madras*. Adlard & Son Ltd., London.
- Hartwell JL. 1967-1971. *Plants Used Against Cancer: A Survey*. *Lloydia* 30-34
- IUCN. 2016. http://www.iucn.org/knowledge/publications_doc/. IUCN, Gland, Switzerland and Cambridge, UK.
- Kanvinde SH. 1999. *Maldivian Gender Roles in Bio-resource Management*. FAO Regional Office for Asia and the Pacific, Bangkok.
- Krishnamurthy K. 1993. The Mangroves. *ENVIS News Letter* 1:1-3
- Kirtikar KR and Basu BD. 1975. *Indian Medicinal Plants* (2nd ed.). Bishen Singh Mahendra Pal Singh. Dehra Dun.
- Lewis WH and Elvin-Lewis MPF. 1977. *Medical Botany: Plants Affecting Man's Health*. John Wiley & Sons. New York.
- Little EL Jr. 1983. *Common Fuel Wood Crops: A Handbook for their Identification*. McClain Printing Co. Parsons. WV.

- MFAMR. 1995. Maldives. Country Report to the FAO International Conference on Plant Genetic Resources. Ministry of Fisheries, Agriculture and Marine Resources. Male, Maldives
- Mooss NS. 1977. Single Drug Remedies. Vaidyasarathy Press Pvt. Ltd., Kottayam.
- Parrotta JA. 2001. Healing Plants of Peninsular India. CAB International. Wallingford. UK
- Perry LM. 1980. Medicinal Plants of East and Southeast Asia. MIT Press. Cambridge.
- Sankaran KV and Suresh TA. 2013. Invasive Alien Plants in the Forests of Asia and the Pacific. FAO Regional Office for Asia and Pacific. Bangkok.
- Selvam V. 2007. Trees and Shrubs of the Maldives. FAO Regional Office for Asia and Pacific. Bangkok.
- Sujanapal P and Sasidharan N. 2014. Handbook on Mangroves and Mangrove Associates of Kerala. Kerala State Biodiversity Board. Thiruvananthapuram.
- The Plant List. 2013. Version 1.1. Published on the Internet; <http://www.theplantlist.org/>
- Tiangburanatham W. 1996. Dictionary of Thai Medicinal Plants, Prachumtong.
- Umberto Quattrocchi 2012. CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology (5 Volume Set). CRC Press. Taylor and Francis group. USA
- USDA-NRCS. 2008. The Plants Database. Baton Rouge, USA: National Plant Data Center. Published on the Internet; <http://www.plants.usda.gov/>
- Warrier PK, Nambiar VPK and Raman Kuttan C. 1995. Indian Medicinal Plants: A Compendium of 500 Species. Orient Longman Ltd. Madras.
- Watt JM and Breyer-Brandwijk MG. 1962. The Medicinal and Poisonous Plants of Southern and Eastern Africa (2nd ed.) E&S Livingstone Ltd., Edinburgh.
- WCSP 2016. World Checklist of Selected Plant Families. Facilitated by the Royal Botanic Gardens, Kew. Published on the Internet; <http://apps.kew.org/wcsp/>
- Wilkie ML and Fortuna S. 2003. Status and Trends in Mangrove Area Extent Worldwide. Forest Resources Assessment Working Paper No. 63.: FAO. Rome. Italy
- Wills JG and Gardiner JS. 1901. The Botany of the Maldive Islands. Annual Review of Botanical Garden of Peradeniya 1 (2), 45-164.

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One of the largest tree in Maldives - Banyan tree (*Ficus benghalensis*), Fuvahmulah Island



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